

CHAPTER 2

ALTERNATIVES

INTRODUCTION

This chapter describes and compares five alternatives, consisting of four “Action” alternatives and the “No Action” Alternative. The alternatives vary in both context and intensity of potential management, and in sum constitute a wide-ranging set of designations, land use allocations, and management decisions. The action alternatives meet the underlying need for the proposed plan amendment and achieve the purposed goals of the amendment. Table 2-2 provides a tabular summary of management actions proposed for each alternative. A detailed discussion of potential impacts by alternatives is presented in Chapter 4 – Environmental Impacts.

Each alternative portrays a different concept for management, as defined by the application of desired future conditions, land use allocations, and management actions. All action alternatives afford protection for public land and Grand Staircase-Escalante National Monument (GSENM) resources, as required by FLPMA and the Monument Proclamation, and ensure that progress will be made towards meeting Rangeland Health Standards in those areas currently evaluated as not meeting Standards.

GSENM will continue to collect standard rangeland measurements on allotments during the DEIS comment period, prior to the release of the Final EIS and Record of Decision (ROD). These data will be considered and incorporated into the allotment permit renewal process prior to permit renewal. These new data will not change alternatives or affect proposed plan decisions described below.

This EIS proposes actions in many different resources as identified in the Management Common to All section. Differences in actions between alternatives occur only in Livestock Grazing and Wildlife Management which is why the alternatives discussion is limited to these two resources. Resources with impacts are addressed in Chapter 4.

DEVELOPMENT OF THE ALTERNATIVES

Continued livestock management under the existing Management Framework Plans (MFPs), as amended, is the No Action Alternative.

The planning team developed four additional alternatives using input from the public, BLM and NPS staffs, and cooperating agencies. The National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations, as well as BLM and NPS planning regulations, require the formulation of a reasonable range of alternatives to address identified planning issues and management concerns. Each alternative was evaluated for consistency with the Monument Proclamation, the Glen Canyon National Recreation Area (GCNRA) enabling legislation, as well as current laws, regulations, and policies.

Some of the livestock management actions included in the MFPs and the 1999 MFP Amendment were found to be acceptable and reasonable and would thus be carried forward under all the alternatives (See Management Actions Common to All Alternatives).

CHAPTER 2

ALTERNATIVES

Public input received during the scoping process was considered to ensure that all issues and concerns were addressed, as appropriate, in developing the alternatives and their management action options. The public scoping process and its results are presented in more detail in Chapter 5 – Public Participation and Preparers.

A number of cooperating agencies participated in alternative development including Kane County, Garfield County, the National Park Service, and the State of Utah. The staff of the BLM Kanab Field Office also participated in the planning process. The BLM coordinated a series of interagency planning meetings during the allotment evaluation and alternative development process. Preliminary drafts of the plan amendment and alternatives were provided to the cooperating agencies for review and comment.

IDENTIFICATION OF THE PREFERRED ALTERNATIVE (C)

Alternative C, “modify grazing management on allotments not meeting Standards including changes in season of use, pasture rotations and temporary suspensions in current authorized active use levels” is the preferred alternative. In developing this alternative, the BLM included an array of actions from among the various proposals that provide advantages with respect to the guiding principles given in Chapter 1. This array of action became Alternative C.

ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

The CEQ guidelines for implementing NEPA requires federal agencies to analyze a “reasonable” range of alternatives that substantially meet the purpose and need for this Draft Plan Amendment/DEIS. There were no reasonable alternatives identified that were beyond the jurisdiction of the BLM. The following specific alternatives, or actions that could be components of alternatives, were suggested but not analyzed or carried forward because they do not fulfill the requirements and needs of this Draft Plan Amendment/DEIS or are outside the scope of the Draft Plan Amendment/DEIS:

No Livestock Grazing Within GSENM

Numerous public comments received during scoping stated that Monument status was sufficient to justify closure to livestock grazing. (Note – GSENM encompasses 83% of the planning area covered by this Draft Plan Amendment.)

The Monument Proclamation states that, “Nothing in this proclamation shall be deemed to affect existing permits or leases for, or levels of, livestock grazing on Federal lands within the monument; existing grazing uses shall continue to be governed by applicable laws and regulations other than this proclamation.” Therefore, it would not be appropriate to eliminate livestock grazing solely due to Monument designation.

An alternative that proposes to close the entire planning area to grazing would not meet the purposes and need of this Draft EIS. The National Environmental Policy Act (NEPA) requires that agencies study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of

CHAPTER 2

ALTERNATIVES

available resources. No issues or conflicts have been identified during this land use planning effort which requires the complete elimination of grazing within the planning area for their resolution. Where appropriate, closures and adjustments to livestock use have been incorporated into the alternatives on an allotment or area basis to address issues identified in the document. Since the BLM has considerable discretion, through its grazing regulations, to determine and adjust stocking levels, seasons-of-use, and grazing management activities, and to allocate forage to uses of the public lands, the analysis of an alternative to entirely eliminate grazing is not needed.

An alternative that proposes to close the entire planning area to grazing would also be inconsistent with the intent of the Taylor Grazing Act (TGA) which directs the BLM to provide for livestock use of BLM lands, to adequately safeguard grazing privileges, to provide for the orderly use, improvement, and development of the range, and to stabilize the livestock industry dependent upon the public range.

The Federal Land Policy and Management Act (FLPMA) requires that public lands be managed on a “multiple use and sustained yield basis” (FLPMA Sec. 302(a) and Sec. 102(7)) and includes livestock grazing as a principal or major use of public lands. While multiple use does not require that all lands be used for livestock grazing complete removal of livestock grazing on the entire planning area would be arbitrary and would not meet the principle of multiple use and sustained yield.

Livestock grazing is and has been an important use of the public lands in the planning area for many years and is a continuing government program. Although the Council on Environmental Quality (CEQ) Guidelines for compliance with NEPA require that agencies analyze the “No Action Alternative” in all Environmental Impact Statements (EISs) for purposes of this NEPA analysis, the “no action alternative” is to continue the status quo which includes livestock grazing (CEQ Forty Most Asked Questions, Question 3). For this reason and those stated above a no grazing alternative for the entire planning area has been dismissed from further consideration in this LUP.”

No Reduction In Livestock Grazing Within GSENM

Numerous public comments received during the scoping period stated that the Monument Proclamation prohibited livestock grazing reductions and “grandfathered” livestock grazing use, therefore preventing any consideration of changes in livestock grazing use levels in the Draft Plan Amendment/DEIS. As quoted previously, the Proclamation neither prohibits livestock grazing reductions nor does it “grandfather” in a specific level of grazing use. Rather, the “applicable laws and regulations” under which livestock grazing is administered by the BLM provide for the adjustment of grazing use, up or down, in response to resource conditions and monitoring. The grazing regulations require that the “appropriate action” be taken when grazing management practices or when levels of grazing use are significant factors in failing to achieve the standards and guidelines for grazing administration. About nineteen percent of the assessed lands do not meet the Standards as a result of existing or historical livestock grazing. Reductions in livestock numbers are one of the options available in meeting the requirement for “appropriate action,” and are considered as a potential change in management.

CHAPTER 2 ALTERNATIVES

Close To Livestock Grazing All Riparian Areas Determined In The MMP As Suitable For Designation Into The National Wild and Scenic River System (NWSRS)

The determinations for areas suitable for designation into the NWSRS were done with livestock grazing as one of the existing uses. There is no justification based on NWSRS criteria for now closing these areas to livestock grazing, a use which at the time of determination did not impact their being judged as suitable for inclusion in the NWSRS.

Manage Livestock Grazing Based Upon Monitoring Indices, Specifically Forage Utilization And Residual Plant Stubble Height

The interdisciplinary team suggested managing grazing by setting 40% utilization objectives on allotments that fail to meet Standards. Several variations of this approach were discussed, along with riparian and upland stubble height objectives. It was determined that setting utilization and/or stubble height indicators as objectives in a planning document conflicted with current BLM policy, and are not necessarily the resource objectives that needed to be met, so the proposal was not carried forward. Allotment specific utilization and stubble height indicators may be used in subsequent Allotment Management Plans to achieve allotment specific resource objectives, but will not be considered further as a planning level requirement or objective.

Submissions By Third Parties

Two proposals were submitted by specialists on behalf of potential affected interests. While neither submittal was consistent with the Purpose and Need behind the proposed changes in grazing management (and as such, did not constitute “alternatives” in the sense of the CEQ Regulations), both provided technical methodologies and information which proved valuable. Data and disclosures from both submittals were incorporated into the analysis to the maximum extent practicable.

MANAGEMENT ACTIONS COMMON TO ALL ALTERNATIVES

This section lists management actions that do not vary by alternative (excepting Alternative A, the “No Action” Alternative) and are therefore “Common to All”. They are grouped and listed here for simplicity. While management actions proposed under the alternatives vary, there are numerous discrete actions that are desirable regardless of which alternative is ultimately selected. Some of these actions consist of management decisions carried forward from older planning documents, while others have been developed during the planning process. The majority of decisions carried forward do not reflect a change in management, either being existing decisions retained (Management Plan Decision to “be carried forward”), or actions required to bring management into conformance with existing laws and policy (such as complying with the Endangered Species Act, or various Executive Orders).

CHAPTER 2 ALTERNATIVES

EXISTING LAND USE PLAN DECISIONS TO BE CARRIED FORWARD

Continue to authorize livestock grazing - Hall Ranch and South Fork Allotments.

Hall Ranch (34 acres) and South Fork (120 acres) are isolated parcels of public lands within private lands. They have been given the designation of “allotment,” and each are authorized 12 Animal Unit Months (AUMs) of livestock use. The authorization is year-long but the areas are only used when livestock are on the adjacent private lands. These parcels may potentially be identified for disposal in the ongoing Kanab Field Office Resource Management Plan process.

Planning Action:

Reauthorize livestock grazing on Hall Ranch and South Fork allotments at 12 AUMs each.

Continue an existing Forage Reserve designation – Phipps Pasture

The Phipps Pasture of the Phipps allotment was designated as a “forage reserve” in a 1999 Land Use Plan (MFP) Amendment. The pasture remains in a condition where the vegetation could provide forage should an emergency situation (fire, drought, infestation) make regularly grazed areas unavailable. The pasture continues to be a viable option for use during emergency circumstances or during restoration efforts on other allotments.

Planning Action:

Retain the existing designation of Phipps Pasture as a Forage Reserve.

Continue most existing closures to livestock grazing

The areas listed below (Table 2-1) were closed to livestock grazing in coordination with Glen Canyon National Recreation Area/National Park Service access difficulties, watershed and riparian protection, conflict with management plans of other agencies, and conflicts with other resource uses. These concerns and the resultant closures remain valid. (See Chapter 3 – Affected Environment).

The seven areas closed in the MFP were found to be unsuitable for livestock grazing in the Kanab/Escalante Grazing Management EIS (1980).

Planning Action:

Continue the following closure decisions:

CHAPTER 2 ALTERNATIVES

Table 2-1 Allotments Closed By Previous Land Use Plan

Area / Allotment	Decision Date	Management (minor/major)	Rationale for Closure
Lower Calf Creek	1964	BLM	Riparian Values & Livestock/Recreation Use Conflicts
Harvey's Fear	MFP 1981	NPS/BLM	Wildlife (Bighorn Sheep) Conflicts
Muley Twist	MFP 1981	NPS/BLM	Unsuitable for Grazing
Navajo Bench	MFP 1981	NPS/BLM	Wildlife (Bighorn Sheep) Conflicts
Spencer Bench	MFP 1981	BLM/NPS	Wildlife (Bighorn Sheep) Conflicts
Dry Rock Creek Pasture, Rock Creek	MFP 1981	NPS/BLM	Critical Watershed Areas
Middle Rock Creek Pasture, Rock Creek	MFP 1981	NPS	Critical Watershed Areas
Rattlesnake Bench	MFP 1981	BLM	Unsuitable for Grazing
Cottonwood Pasture, Deer Creek	LUP Amendment 1999	BLM	Riparian Values & Livestock/Recreation Use Conflicts
Escalante River	LUP Amendment 1999	NPS/BLM	Riparian Values & Livestock/Recreation Use Conflicts
McGath Point	LUP Amendment 1999	BLM	Riparian Values & Livestock/Recreation Use Conflicts
River and Horse Canyon Pastures, Big Bowns Bench	LUP Amendment 1999	BLM	Riparian Values & Livestock/Recreation Use Conflicts
River Pasture, Deer Creek	LUP Amendment 1999	BLM	Riparian Values & Livestock/Recreation Use Conflicts
River Pasture, Phipps	LUP Amendment 1999	BLM	Riparian Values & Livestock/Recreation Use Conflicts
Saltwater Creek	LUP Amendment 1999	BLM	Riparian Values & Livestock/Recreation Use Conflicts
Steep Creek	LUP Amendment 1999	BLM	Riparian Values & Livestock/Recreation Use Conflicts

Remove existing Horses from Navajo Bench, Harvey's Fear, and Spencer Bench Areas

Recommendation RM-5.1 from the Escalante MFP called for the removal of these horses. It was never implemented. There has been no change in circumstances since then. The vegetation resource conditions are still degraded, and the herd size (13-16 animals) is too small to maintain genetic viability. Introducing new genetic stock would increase the herd size, with an unacceptable negative impact on the plant community. A portion of the forage

CHAPTER 2

ALTERNATIVES

base for the herd is on NPS lands, a use which conflicts with NPS regulations concerning exotic species.

Planning Action:

Recommendation RM-5.1 from the Escalante MFP will be carried forward and implemented.

EXISTING LAND USE PLAN DECISIONS TO BE MODIFIED AND CARRIED FORWARD

Close one currently unallotted allotment – Antone Flat

The Antone Flat Allotment, designated for unallotted status (no grazing) in the Escalante MFP (RM 2.8), would be closed to livestock use and the available forage allocated for wildlife. The allotment has not been used for livestock grazing. It is located within critical deer winter range and provides important forage for wildlife as well as watershed protection for the Escalante River system. No livestock grazing AUMs are currently authorized for this area. This decision clarifies the intent of the Escalante MFP decision and updates the wording to current direction in BLM's Land Use Planning Handbook 1601-1.

Planning Action:

Close Antone Flat allotment to livestock grazing.

Close one allotment and one pasture which are currently unused, but designated as forage reserves – Wolverine Pasture on Deer Creek Allotment, Little Bowns Bench Allotment

The Wolverine Pasture of the Deer Creek allotment and the Little Bowns Bench allotment, designated as forage reserves in a 1999 Land Use Plan Amendment Decision, would be closed to livestock use and managed for watershed protection and wildlife purposes. These two areas were placed in forage reserve status because the rugged topography, lack of access, lack of water, and limited forage made grazing difficult. There was no interest during the 1998-2004 drought emergency in accessing the forage in these "reserves." There were two requests to use these reserves in July 2007, but it was recommended by Monument range staff that they not be used because of drought conditions at that time. The request came in response to the Milford Flat Wildfire that consumed more than 300,000 acres of grazing allotments in Beaver and Millard Counties. This closure would not change management that has existed since the relinquishments were offered, therefore it will not be analyzed in Chapter 4, Environmental Impacts.

Planning Action:

Close Little Bowns Bench allotment to livestock grazing.

Close Wolverine Pasture of Deer Creek allotment to livestock grazing.

Vacate a 1981 MFP closure decision for the Dry Hollow Allotment

The Dry Hollow allotment, designated for closure in the Escalante MFP (1981), would be open for livestock grazing and be combined with the Boulder Creek allotment. The decision in the Escalante MFP to close the allotment to livestock grazing was never implemented. The allotment has been used as a pasture in conjunction with the adjacent Boulder Creek allotment and has been grazed every other year. A rangeland health assessment conducted in

CHAPTER 2

ALTERNATIVES

the allotment found that it is meeting Rangeland Health Standards. Grazing use would be authorized as part of the Boulder Creek allotment and no additional AUMs, above those currently permitted, would be authorized.

Planning Action:

Designate lands within Dry Hollow allotment as open to livestock grazing.

Implementation Action:

Incorporate Dry Hollow allotment into Boulder Creek allotment by a rangeline agreement.

Open one currently closed area to grazing – Flag Point

Flag Point will be opened and combined with the White Sage allotment, but with no increase in AUMs above those currently authorized on the White Sage allotment. The area is located between two sections of the White Sage allotment and separated from other public lands by private lands and the Vermilion Cliffs of Flag Point. This former allotment (or piece of an allotment) comprising 300 acres, was apparently closed to livestock grazing prior to 1980, but has been used without authorization for trailing between the two sections of the White Sage allotment, and by horses from adjacent private lands. This area would provide improved management and greater flexibility in managing the White Sage allotment by dispersing livestock use. Fencing would be required to ensure that livestock do not drift onto adjacent private land.

Planning Action:

Designate 300 acres open, and add to White Sage allotment with no increase in AUMs.

Implementation Action:

Execute rangeline agreement and cooperative range improvement (fence) agreement with permittee.

Future Project Implementation:

Construct a fence to separate the area from adjacent private lands.

Amend the GRAZ-1 Monument Management Plan Grazing Decision

Decision GRAZ-1 in the Monument Management Plan (MMP) describes the Fundamentals of the Rangeland Health assessment and evaluation process, as well as other portions of the BLM grazing regulations. The BLM is already required to follow these regulations so they do not require a plan level decision. Changes in the grazing regulations or BLM policy would introduce conflict with the Monument Management Plan. Since the Rangeland Health assessment process is being completed, it is appropriate to remove the process description from the MMP and replace it with specific land use plan levels determinations. While several sections in GRAZ-1 remain current, other items are not consistent with the BLM's planning regulations (i.e., Allotment Management Plans would designate lands available for livestock grazing) or are out of date (i.e., completion of AMPs within 3 years of MMP approval) and need to be deleted.

CHAPTER 2

ALTERNATIVES

Planning Action:

Amend the MMP by removing all of GRAZ-1 except for the following:

“Grazing permits will ~~also~~ include any administrative access granted for the operation of the permit, and may include other authorizations (such as overnight camping or group size exceptions) necessary for operation of the permit.”

“No allotments will be converted from cows and horses to domestic sheep *or goats* within at least a 9-mile buffer of bighorn sheep habitat, except where topographic features or other barriers prevent physical contact.”

EXISTING MONUMENT MANAGEMENT PLAN DECISIONS TO BE AMENDED OR CLARIFIED

Discussion

Over eight years of experience in Monument Management Plan implementation has uncovered inconsistencies and/or conflicts in the determinations concerning Vegetation Restoration Methods, Noxious Weed Control, Forestry Products, Native Vs. Non-native Plants, Reseeding after Fires, and Restoration and Revegetation. In particular, a central issue has surfaced concerning inconsistencies and conflicting direction in the use of native and non-native plant species in revegetation projects. The MMP anticipated a need for future modification, using a process outlined in the adaptive management section. Implementation experience has provided the knowledge necessary to apply the adaptive management process.

Additionally, the MMP does not analyze the impacts of (or to) livestock grazing from other resources. Consequently, some of the existing MMP decisions conflict with authorized and on-going rangeland activities. This conflict requires resolution.

Additional plan issues which need resolution/clarification:

- Grazing related range improvements, specifically seedings, are not addressed.
- The existing determinations on “Management ignited fire” have been superseded by the new Utah BLM Statewide Fire Plan.
- The “Noxious weed” determination does not include exotic or invasive non-native species.
- Current plan determinations do not allow for the creation of restoration forage reserves containing local genetics.

In order to simplify and consolidate land use plan decisions for vegetation management and provide for coordination with rangeland management and livestock grazing, the below listed sections are being merged into a single Vegetation Management section and the individual sections deleted.

- Forestry Products (i.e., decisions FP-1 through FP-4).
- Native Vs. Non-native Plants (i.e., decisions NAT-1 through NAT-6).
- Noxious Weed Control (i.e., decisions NW-1 through NW-8).
- Restoration and Revegetation (i.e., decisions REV-1).

CHAPTER 2

ALTERNATIVES

- Vegetation Restoration Methods (i.e., decisions RM-1 through RM-7).
- Reseeding after Fires (i.e., decisions SEED-1 and SEED-2).
- Special Status Plant Species (i.e. decision SSP-6).

Items in the referenced sections of the MMP which merely restated existing agency policy or regulatory requirements, rather than land use plan level decisions, have been deleted and some operational requirements have been incorporated into the Standard Operating Procedures.

Planning Action

Replace portions of the existing Monument Management Plan with language ***added*** or ***deleted*** as shown below:

NOTE: A discussion/rational section follows the complete listing of the amendments.

Vegetation

[Retain existing language, with the following modification]

VEG-1

The BLM will place a priority on the control of noxious weed species and prevent the introduction of new invasive species ***per national guidance and local weed management plans***, in conjunction with Kane and Garfield Counties and the adjacent U.S. Forest Service, ~~and~~ National Park Service units, ***and appropriate local resource groups or individuals***. Further, in keeping with the overall vegetation objectives and Presidential Executive Order 11312, native plants will be used as a priority for all projects in the Monument except existing range seedings where a mixture of native and non-native will be used. ~~(see the Noxious Weed Control section for related decisions).~~

VEG-2 (unchanged)

The BLM will continue to coordinate with other organizations to inventory the Monument and evaluate the need for vegetation protection strategies. Such research will be coordinated as part of the implementation and adaptive management framework outlined in Chapter 3, and the results will be interpreted for management and public education purposes.

VEG-3

All proposed developments or surface disturbing activities will be required to include a site assessment for impacts to vegetation. Appropriate strategies will be used to avoid sensitive vegetation associations, and restoration provisions will be included in projects ~~(see the Restoration and Revegetation section for related decisions).~~

Special Status Plant Species

[Retain existing language, with the following modifications]

SSP-5

Future fuelwood cutting areas will not be designated in listed plant populations. ~~(see the Forestry Products section for related decisions).~~ ***(See "Vegetation Management" section).***

SSP-6 delete. [addressed in VM-7]

~~Areas with threatened or endangered plants will be targeted for noxious weed control activities as a first priority. BLM employees or contractors with appropriate certification will be responsible for use of chemicals in noxious weed~~

CHAPTER 2

ALTERNATIVES

SSP-10 [clarify legal protections under Endangered Species Act]

Reseeding or surface disturbing restoration after fires will not be allowed in areas with ~~special status~~ **listed** and candidate plant species. Natural diversity and vegetation structure will provide adequate regeneration. Management ignited fires will also not be allowed in these areas unless consultation with the USFWS indicates that fire is necessary for the protection and/or recovery of listed species.

Vegetation Management

[New section, replaces “Vegetation Restoration,” “Noxious Weed Control,” “Forestry Products,” “Native Vs. Non-native Plants,” “Reseeding after Fires,” and “Restoration and Revegetation”]

Consistent with the overall goal of achieving a natural range of native plant associations on the Monument, the intent of vegetation management on the Monument is to restore plant communities to a fully functional condition, with the appropriate, site specific, mix of native species, except for existing seedlings which were established before monument designation (see VEG-1).

Vegetation management consists of the removal or reduction of undesired species, and the introduction or increase of desired species, through preparation of the site for seeding/transplanting, and follow-up actions which ensure seedling success. Techniques which alter the existing species composition include mechanical reduction, managed herbivory (livestock and wildlife), managed fire, and chemical herbicides. Methods of seedbed preparation are mainly mechanical. Seedling success is achieved through removal of plant competition (chemical or mechanical) and removal of undesired animal herbivory.

VM-1 (new)

All surface disturbing projects proposed in the Monument will contain a restoration or revegetation component.

VM-2 (MMP RM-7 revised)

Monitoring plans with quantitative success criteria will be developed for each restoration project. These success criteria will determine the effectiveness of management decisions for the project area, including setting goals for wildlife and livestock management.

VM-3 (new)

Equipment selection will be consistent with the Monument Management Zones. Within the primitive zone, only hand tools and non-motorized mechanized equipment may be used for restoration work.

VM-4 (new)

Outside of the primitive zone, mechanized motorized equipment may be used for surface scarification, site preparation and seeding. Equipment selection will be made with emphasis on minimizing surface disturbance, detrimental impacts on soils, and unnecessary impacts on Monument resources. The GSENM Advisory Committee will be consulted before the use of machinery for treatments is permitted.

VM-5 (MMP RM-4 and NW-5 revised)

Chemical application methods may be used in restoration to remove undesired species, Chemical herbicide use must conform to the intent of restoring vegetation communities, and must be essential to achieving Desired Future Condition. The Monument Advisory Committee will be consulted before any aerial application.

VM-6 (MMP NW-3 revised)

An array of methods will be used as appropriate for the control of specific exotic or invasive species. These methods include: the use of chemicals (aerial spraying, hand spraying, and painting), hand cutting, biological control agents, and manual pulling. Each of these methods has a place in the control

CHAPTER 2

ALTERNATIVES

of these invasive species and will be evaluated for their effectiveness as eradication projects are designed.

VM-7 (NW-6 revised)

The exotic or invasive species control program will target species in a prioritized manner. Priorities for weed control may include: invasiveness of the species, extent of invasion, sensitivity of the area being invaded, and accessibility. Areas with special status species habitat will have a high priority for removal.

VM-8 (RM-6 revised)

The intent of managed fire is to restore natural fire regimes and fire dependent plant communities. Introduced fire may be used as a restoration tool on the Monument, but will not be used within plant communities (such as Blackbrush) where fire is not a naturally occurring disturbance. Proposed ignition sites will be assessed for the presence of non-native species (e.g., cheatgrass) which would alter natural fire regimes.

VM-9 (MMP NAT-1 & NAT-2 consolidated and revised)

Outside of range seedings (see VEG-1), non-native plants may be used in situations where they are essential to protecting Monument resources by stabilizing soils or displacing invasive and noxious weeds. In these situations, non-persistent, non-invasive species should be used in combination with native species to facilitate the ultimate establishment of native species. Non-native plants may also be approved when they constitute an integral part of research projects.

VM-10 (new)

The proposed use of non-native plants will be assessed by an interdisciplinary team during environmental analysis. The analysis should include an “all native” alternative to evaluate the impacts of approving non-native species. The GSENM Advisory Committee will be consulted prior to the use of non-native seed.

VM-11 (MMP NAT-5 revised)

Non-native plants will not be used to increase forage for livestock and wildlife, except in restoration of non-structural range improvements (i.e., range seedings) which were permitted prior to the creation of the Monument. All range improvement seedings shall be maintained for their intended purposes, and should include a diversity of species, including natives, appropriate for the location.

VM-12 (new)

When available, the use of locally adapted and collected native species will take precedence over native species from dissimilar ecoregions when selecting seed mixes.

VM-13 (MMP RM-3, RM-6 revised)

Livestock grazing may need to be modified, or excluded, following rangeland restoration projects, rangeland seeding maintenance, or introduced fire. If exclusion is necessary, at least two growing seasons will be required, except in experimental or research capacity or for restoration purposes. The exclusion may be continued until such time as monitoring determines the purpose of the project has been achieved, and that sufficient forage exists to resume grazing.

VM-14 (FP-1 revised)

Fuelwood harvesting, post cutting, and Christmas tree cutting, either private or commercial, will be authorized by permit within designated areas (MMP Map 3).

VM-15 (FP-2 revised)

Additional areas may be designated to meet the overall vegetation management objectives within either previously disturbed areas (i.e. existing rangeland seedings, wildfires, historic permitted woodcutting

CHAPTER 2

ALTERNATIVES

areas, etc.) or areas where the removal of woodland products is necessary to achieve Desired Future Condition.

VM-16 (FP-3 unchanged)

In general, the off-highway vehicle restrictions discussed in the Transportation and Access sections will apply to forestry product areas (i.e., travel will be allowed only on designated routes and vehicles will be permitted to pull no more than 50 feet off designated routes in the Outback Zone). However, because forestry product collection activities are controlled by a permit and permits are issued to further overall management objectives, the BLM could authorize access on administrative routes and, in some cases, in areas more than 50 feet away from routes. These areas/provisions will be delineated in the permit prior to its issuance.

VM-17 (FP-4 revised)

Vegetation treatments within woodlands may include the commercial resale of residual products to offset treatment costs (i.e., Stewardship contracting). Commercial resale authority would not include commercial timber harvesting for Aspen, Douglas fir or ponderosa pine species.

Collections

COL-1 (seed collection language added)

Collection of Monument resources, objects, rocks, petrified wood, fossils, plants, parts of plants, animals, fish, insects or other invertebrate animals, bones, waste, or other products from animals, or of other items from within the Monument will be prohibited. Exceptions could include: collections authorized by permit in conjunction with authorized research or management activities *including commercial collection of native plant seeds for public lands restoration*; the collection of small amounts of fruits, nuts, and berries for personal, non-commercial use; the collection of certain natural materials by Native American Indians under BLM permit; the collection of antlers or horns as provided for by UDWR regulations; and the collection of dead and down wood for immediate use in campfires, where campfires are allowed. The above prohibitions shall not be deemed to diminish the responsibility and authority of the State of Utah for management of fish and wildlife, including the regulation of hunting and fishing, on Federal lands within the Monument.

Discussion and Rationale for Proposed MMP Amendments

VM-9, VM-10, VM-11– MMP direction for using, or not using, native and non-native plant species in project work is unclear, which became apparent when rangeland seeding projects were considered as part of this Draft Plan Amendment. Currently VEG-1 and NAT-1 place a “priority” on the use of native species; NAT-2, NAT-4 and SEED-1 describe where non-native species may be used; NAT-3 prohibits the consideration of non-native species in project planning; and NAT-6 establishes requirement for monitoring non-native species when they are used. As a result of these seemingly conflicting decisions, the MMP appears to mandate the use of native species while allowing flexibility to include non-natives. VM-9, VM-10, & VM-11 clarify this issue by specifying the restrictive conditions under which non-native seed would be considered along with instituting a review and analysis process.

VM-11– Most rangeland seedings were authorized under Section 4 of the Taylor Grazing Act, and predate the creation of the Monument. Cooperative Agreements between the BLM and the grazing permittees define the intent of the seedings, along with individual responsibilities for maintenance. These Cooperative Agreements remain in effect until cancelled in a grazing decision (which would remove any existing requirements for management). Many of the seedings provided increased forage in one location so that

CHAPTER 2

ALTERNATIVES

grazing could be reduced or temporarily suspended in other locations where watershed stability issues had been identified (e.g., Colorado River salinity). Future management of these seedlings was not addressed in the MMP. The new wording clarifies that existing range permit privileges will be respected, while modifying species selection to increase plant community diversity.

VM-12, COL-1 – For vegetation restoration projects, locally adapted native seed is preferred over “native” seed collected in other areas. MMP COL-1 has been interpreted as prohibiting the issuance of commercial seed collecting permits within GSENM. As the need for native seed has greatly increased, the desire for locally adapted seed has increased. This revision is intended to facilitate the collection and availability of locally adapted native seed for vegetation restoration within the Monument.

VM-13 - In order for rangeland restoration to be successful, there must be sufficient time given for the vegetation to establish itself in self-sustaining communities. This requires a period of time when major disturbances or use of emerging vegetation must be restricted as much as possible. All rangeland restoration projects would have restoration objectives developed prior to initiation to provide for a measure of success and attainment of restoration objectives.

VM-15 – Implementation of FP-2 has been hindered by confusion over the scope of “previously disturbed.” This revision attempts to provide additional guidance concerning this term. The revision also provides for the opportunity to identify treatment areas and use woodland product sales to achieve vegetation management objectives in woodlands (primarily pinyon-juniper woodlands).

VM-17 – A major tool available for woodland vegetation treatments is the commercial resale of woodland products under new authorities such as Stewardship Contracting to reduce costs and make available non-typical forest products. Biomass used as an alternative for power plant fuel and school utility systems has become a common use for these products. The MMP FP-4’s prohibition on commercial timber harvest could be interpreted as preventing the commercial resale of woodland products. This revision is intended to differentiate woodland product resale from “traditional” commercial timber harvesting. Site specific environmental analysis would be conducted to analyze woodland treatment proposals and to establish stipulations.

NEW MANAGEMENT ACTIONS – LIVESTOCK MANAGEMENT

Desired Future Conditions

- Grazing would be authorized at a level which ensures both long term rangeland health and sufficient capacity to withstand periods of stress, while maintaining the economic vitality of the local livestock industry.
- All grazing lands, either upland or riparian, would meet or be making progress towards meeting the Utah Resource Advisory Council Standards for Rangeland Health. While maintaining progress, sufficient forage resources would be available to ensure the continuation of grazing during periods of exceptional disturbance, such as drought or fire.

CHAPTER 2

ALTERNATIVES

- Long term authorized use levels would be predictable, allowing economic stability to the permittees, while maintaining the economic base of the industry within local communities.

Add a Growing Season Rest or Deferment Requirement

Vegetation, particularly grasses, is most vulnerable to grazing impacts during the period of time when a plant devotes its energy towards the production of flowers and ultimately seeds. Use of plants by grazing animals year after year during this period has been shown to seriously compromise plant vigor, root growth, and seed production. A restriction on grazing in consecutive years would provide a minimum of one season of rest and recovery over two growing seasons. The growing season is considered the time from boot stage to seed ripe (or sometimes called 'floral initiation to seed scatter'). The "growing season" may vary annually and is affected by factors such as elevation, precipitation, slope, aspect, and species. As a result, plant physiology and monitoring will determine the "growing season" rather than fixed dates. Growing season rest will also have a positive impact on soils, reducing compaction during times of high soil moisture. The exception for single pasture allotments meeting RLH Standards would avoid creating an unworkable management plan and recognize the fact that current grazing practices are allowing RLH Standards to be met.

Planning Action:

Amend plan to add the following determination:

GRAZ-2: Livestock grazing will not be authorized for consecutive years in the same pasture during the growing season for cool (spring) and warm (summer) season grasses with exceptions for single pasture allotments used during the warm season grass growing season where RLH Standards are being met.

Open one unallotted area –Varney Griffin allotment

The Varney Griffin allotment has been managed as an unallotted allotment with multiple annual trailing permits issued to one of the Permittees who trails through the area to access their permits on the Dixie National Forest. This allotment has been used to gather to and then move onto the forest or to their winter permit areas. Often livestock bunch up on the end fences and watering locations and increase impacts on the surrounding riparian areas, and wildlife habitat. The new authorized permit of 50 AUM's will allow for small herds to be trailed through the pasture. These small herds will move through the trailing area in a single days time. This permit will be issued to the Permittee with terms and conditions that will restrict the use to no more than 50 AUM's in a trailing season. The Trailing Pasture ingress and egress points and the actual dates of entry will be based on the Forest Service pasture rotation. Livestock will not be allowed to enter the trailing pasture before authorization to enter Forest Service Pastures has been received.

Planning Action:

Open the Varney Griffin allotment to grazing and authorize 50 AUM's of permitted (trailing) use.

CHAPTER 2

ALTERNATIVES

Include one unallotted area within Upper Paria allotment

Add one unallotted area, referred to as Unallotted-South in Appendix 1, consisting of approximately 16,826 acres, to the Upper Paria allotment. This action would allow livestock grazing in this area during the current season of use for the Upper Paria allotment, but would not change the permitted AUMs or grazing preference.

Planning Action:

Include the Unallotted-South area in the Upper Paria allotment.

Close one unallotted area– Glen Canyon NRA

This is a small area in the Glen Canyon National Recreation Area located between the Soda Allotment and lands closed to grazing. It is inaccessible due to topography and is not used for livestock grazing. It appears to be a remnant area cut off when Lake Powell was filled. No livestock grazing AUMs are currently authorized in this area.

Planning Action:

Close Unallotted area on Glen Canyon National Recreation Area to livestock grazing.

Set Standard Requirements and Design Restrictions on Range Improvements

Range improvements impact wildlife and cultural sites. Proper range improvement design will prevent or mitigate many of these impacts. BLM policy requires the use of protective measures during the construction of rangeland improvements, with intent to ensure that environmental impacts are minimized. The current design criteria will be updated based upon this impact assessment. Specific measures include fencing design requirements which do not hinder wildlife movement, riparian protective measures, and wildlife safety measures.

Planning Action:

Kanab/Escalante Grazing Management EIS, *Design Specifications and Standard Operating Requirements for Rangeland Developments* (see Appendix 10) will be revised, updated, and incorporated into the Monument Management Plan.

Incorporate BLM guidance for Drought Management

BLM has issued Instruction Memorandum No. 2003-074 (Appendix 2) for drought management.

NEW MANAGEMENT ACTIONS – VEGETATION

Desired Future Conditions

- “Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved as indicated by... appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan conforming to these Standards.” (*Utah BLM Fundamentals of Rangeland Health, Standard 3*)
- “The Monument will be managed to achieve a natural range of native plant associations. Management activities will not be allowed to significantly shift the makeup of those

CHAPTER 2

ALTERNATIVES

associations, disrupt their normal population dynamics, or disrupt the normal progression of those associations.” (*Monument Management Plan*)

Manage for Desired Plant Community

The existing Monument Management Plan language requires that vegetation be “managed to achieve a native range of plant associations,” but does not specify what that range of “plant associations” are. The Utah Rangeland Health Standards also requires management for the “appropriate amount, type and distributions of vegetation reflecting the presence of the Desired Plant Community [DPC] where identified in a land use plan conforming to these Standards.” A Desired Plant Community is established in Appendix 6, which includes values for cover, functional group composition, dominant and desired species, revegetation, and wildlife habitat.

Planning Action:

Amend Plan to add the following determination:

VEG-4: Manage vegetation to achieve or maintain Desired Plant Communities. When the Desired Plant Community can no longer be achieved due to vegetation having crossed an ecological threshold, manage sites to maintain soil, hydrologic, and biotic processes.

NEW MANAGEMENT ACTIONS – SPECIAL STATUS PLANT SPECIES

Desired Future Conditions

- Species listed as threatened or endangered would be recovered, with no prospective future species listings.
- Management actions would not jeopardize the continued existence of special status plants.
- Noxious and invasive species that compete with rare plants would be contained.

Modify grazing management to protect federally listed plants

Surface disturbing activities associated with grazing management facilities will be prohibited within habitat occupied by Federally listed plant species.

Planning Actions:

Addressed in existing determinations:

SPP-11 through SPP-25

Amend Plan to add the following determination:

VEG-5: Range improvements, salt blocks, and supplements will not be placed within habitat occupied by threatened or endangered plant species.

NEW MANAGEMENT ACTIONS – RIPARIAN AND WATER RESOURCES

Desired Future Conditions

- Riparian areas would continue in, or progress towards, Proper Functioning Condition (PFC).
- Watersheds would meet, or be making progress towards meeting, Standards for Rangeland Health.

CHAPTER 2

ALTERNATIVES

- Stream channel morphology and functions would be appropriate to the local soil type, climate, and landform.
- Livestock grazing would not prevent riparian areas from achieving state water quality standards.
- Livestock grazing in riparian areas would not adversely affect the natural life cycles of amphibians, fish, and aquatic invertebrates.
- New water developments could be used as a management tool to better distribute livestock when deemed to have an overall beneficial effect on Monument resources, including water sources and riparian areas, or to restore or manage native species or populations. Existing water developments will be managed to meet the objectives of the MMP and the goals of this plan amendment.

Restore functionality to riparian areas impacted by range improvements

Riparian areas in locations where range improvements have been installed, or are proposed, will be restored to natural plant demographic and successional processes, by the use of proper improvement design, installation and operation.

Planning Actions:

Addressed in existing determinations:

RIPA-2, WAT-1, WDEV-1

Addressed in proposed determinations:

Design Restrictions and Standard Operating Requirements for Rangeland Development (See Appendix 10)

Implementation Actions:

- Implement the Riparian Toolbox as an assessment and corrective action instrument. (See Appendix 4)
- Pipe water to tanks or troughs outside of the immediate riparian area when waters are developed or redeveloped.
- Install float valves on all new and existing water developments when appropriate.
- Turn off water systems when not required by livestock unless otherwise required to meet resource or maintenance needs
- Implement a monitoring and science program to determine the effectiveness of management actions, assess resource conditions over time, and provide for adaptive management as land use decisions are implemented.

NEW MANAGEMENT ACTIONS – BIOLOGICAL SOIL CRUST (Issue 1, Standard 3, Desired Species)

Desired Future Conditions

- The health and distribution of biological soil crust is retained or improved.
- Research is undertaken to improve understanding and management of biological soil crusts, to include determining proper function, distribution and species composition of crusts.

CHAPTER 2

ALTERNATIVES

Identify, prioritize and protect important areas of biological soil crust

Preserve and protect reference areas and populations of rare species and unique habitats (i.e., gypsum soils).

Planning Actions:

Addressed in existing determination
SOIL-1, SOIL-2, VEG-3

Implementation Actions

Locate rangeland improvements, salt blocks, and supplements on sites with low potential for biological soil crust when possible.

NEW MANAGEMENT ACTIONS – WILDLIFE

Desired Future Conditions - General

- Sufficient forage, water, cover, and space would be available for wildlife.
- Plant communities, and their dependent wildlife species, would be maintained or restored.
- Habitat connectivity and migration corridors would be maintained and wildlife movement would not be impeded by livestock management.

Manage riparian habitat for wildlife (see also New Management Actions – Riparian)

Meet wildlife needs by protecting and preserving water availability and quality.

Planning Actions:

Addressed in existing determinations:
RIPA-2, WAT-1

Addressed in proposed determinations:

Design Restrictions and Standard Operating Requirements for Rangeland Development (See Appendix 10)

Implementation Actions:

- Design water developments to maintain sufficient water to sustain existing native flora and fauna at the source and in downstream riparian areas.
- Make water sources available to wildlife outside the grazing season.
- Install wildlife escape ramps on water improvements.

Desert Bighorn Sheep

- Objectives contained within the Utah Statewide Management Plan for Bighorn Sheep would be achieved.
- Natural water sources in bighorn sheep habitat would provide for multiple uses while maintaining them as a viable bighorn sheep water source.

Planning Actions:

Addressed in existing determinations:
FW-1 and 3, GRAZ-1 (as proposed)

CHAPTER 2

ALTERNATIVES

Greater Sage Grouse

- The conservation of sage grouse and sage grouse habitat would be advanced in accordance with the BLM's National Sage Grouse Habitat Conservation Strategy and Utah's Strategic Management Plan, to avoid contributing to the need to list the sage grouse as a threatened or endangered species under the Endangered Species Act.
- The integrity of sagebrush habitats will be sustained and improved, insuring that habitats will be of such quality, quantity and continuity to maintain sustainable populations of sage grouse. (*BLM National Sage Grouse Habitat Conservation Strategy*)

Planning Actions:

Addressed in existing determinations:

SSA-1, 2, 5, and 8

Implementation Action:

Implement the UDWR Sage Grouse Strategic Management Plan, the BLM National Sage Grouse Habitat Conservation Strategy, and recommendations from local sage grouse working groups to protect, maintain, or enhance current greater sage grouse populations and habitat.

Mule Deer

- Critical winter habitat would contain a mixture of shrub, grass, and forbs species.
- Mule deer migration routes would remain unfragmented.

Planning Actions:

Addressed in proposed determinations:

VEG-4

Design Restrictions and Standard Operating Requirements for Rangeland Development (See Appendix 10)

Implementation Actions:

- All fences in mule deer habitat would be modified or constructed to accommodate migration and movement.
- Mule deer habitats would be managed towards the population goals and objectives contained within UDWR's Deer Herd Management Plans for units 26 and 27.

Pronghorn Antelope

- Pronghorn antelope habitat would include a mix of forbs, grasses, and browse species.
- Water sources would ensure good year-round distribution of Pronghorn antelope.
- Pronghorn antelope movements would be unimpeded.

Planning Actions:

Addressed in proposed determinations:

VEG-4

CHAPTER 2

ALTERNATIVES

Design Restrictions and Standard Operating Requirements for Rangeland Developments

Implementation Actions:

- Institute a monitoring plan to serve in achieving habitat and population goals.
- Work cooperatively with UDWR to achieve a population of approximately 500 animals in the Clark Bench/Lake Powell area of Herd Unit 26.
- Manage fawning grounds for sufficient browse cover to protect fawns and for forb production to provide for lactating does.
- Develop new water sources, or reconstruct existing ones, to gain better distribution.
- All existing and future fences in Pronghorn antelope habitat would be modified or constructed to accommodate migration and movement

NEW MANAGEMENT ACTIONS – SPECIAL STATUS WILDLIFE SPECIES (Issue 1, Standard 3, Desired Species)

Bald Eagle

- Livestock grazing practices are adopted that would protect or improve riparian structure and/or composition to provide prey habitat.
- Livestock grazing practices would provide for the regeneration of large trees as replacement roosts, perches, and nest platforms.

Planning Actions:

Addressed in existing determination:
RIPA-1

Implementation Actions:

- Manage riparian areas for Desired Plant Community
- Manage riparian areas for woody species multiple age class structure to produce replacement roost and perch platforms.

California Condor

California condor key habitats, including those for foraging, nesting, and roosting, would be managed to protect and preserve those associated vegetation communities by applying sound grazing management principles.

Planning Action:

Addressed in existing determination:
SSA-23

Implementation Action:

When consistent with other laws and regulations, encourage livestock owners to leave livestock carcasses on rangelands to provide an important food source for condors.

CHAPTER 2

ALTERNATIVES

Mexican Spotted Owl

- Prey species habitat is managed to maintain populations of mice, voles, and rats within Mexican spotted owl critical habitats. Habitat maintenance includes good herbaceous ground cover (as indicated by good to excellent rangeland conditions), along with adequate levels of residual plant cover, seeds, fruits, and regeneration.
- The goals identified in the USFWS Mexican spotted owl Recovery Plan would be met.
- Livestock management related disturbances are avoided within critical habitat

Planning Action:

Addressed in existing determination:

SSA-21

Addressed in proposed determinations:

Design Restrictions and Standard Operating Requirements for Rangeland Developments

Implementation Actions:

- No range improvement construction within Mexican spotted owl Protected Activity Centers (PACs).
- No vegetation restoration in areas where Mexican spotted owls roost or nest unless USFWS consultation indicates no adverse effects.
- Vegetation treatments within PACs limited to non-breeding season (September 1st through February 28th).

Southwestern Willow Flycatcher

- Negative impacts by livestock grazing are reversed or eliminated in suitable or potentially suitable Southwest Willow Flycatcher habitat.
- The Southwest Willow Flycatcher USFWS livestock management guidelines are met.

Planning Action:

Addressed in existing determination:

SSA-22

Implementation Actions:

- Restrict livestock trampling impacts to less than 10% of alterable stream banks.
- Limit utilization to 40% on current year's growth of woody species and herbaceous species in Southwest Willow Flycatcher breeding habitat.
- Manage livestock within the Paria River segment of the Powell Management Unit to recover potential Southwest Willow Flycatcher breeding habitat.

NEW MANAGEMENT ACTIONS – CULTURAL RESOURCES

Desired Future Condition

Adverse impacts to National Register eligible sites from grazing are prevented or minimized with no discernable net loss of cultural resources scientific information.

CHAPTER 2

ALTERNATIVES

Initiate a Cultural Protocol for livestock grazing impacts (Appendix 3)

Exclude, or if impractical, mitigate the impacts of livestock at all significant cultural sites.

Planning Action:

Amend Plan to add the following determination:

GRAZ-4: Cultural resource impacts from livestock will be prevented or mitigated by adherence to the Livestock Grazing Impacts Cultural Resources protocol.

Implementation Actions:

- Identify, quantify, assess and monitor livestock impacts through a comprehensive inventory and monitoring program.
- Prioritize protective actions which meet the threshold criteria given in the Protocol.

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives

Resource or Resource Use	Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
General theme of Alternative	Maintain current level of resource use and protection. Reissue grazing permits with existing Terms & Conditions.	Make progress towards Standards using current range management techniques, with minimal stocking adjustments. Reissue grazing permits with existing Terms & Conditions.	Achieve Standards by allotment specific modification of grazing management with minimal temporary grazing suspensions and adjustments. Reissue grazing permits with Terms & Conditions.	Achieve Standards by allotment specific modification of grazing management including temporary grazing suspensions on allotments which fail upland Standards. Reissue grazing permits with Terms & Conditions.	Achieve Standards by allotment specific modification of grazing management including temporary grazing suspensions on allotments which fail riparian and/or upland Standards. Reissue grazing permits with Terms & Conditions.
Authorized Grazing Use (AUMs)					
AUMs estimated as available for active use upon implementation of Alternative (initial)	76,457	76,507	74,580	62,681	58,829
AUMs estimated as available for active use upon achieving Rangeland Health Standards (potential)	76,457	76,507	76,507	75,757	73,800
AUMs proposed for temporary suspension from current active use upon (initial) implementation	0	0	1,877	13,776	17,628
AUMs that could be restored to active use upon achieving Rangeland Health Standards (potential)	0	0	1,927	13,076	14,971
Long-term change in active use following successful alternative implementation	0	50	50	-700	-2,657

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

Resource or Resource Use		Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Livestock Grazing Management						
Allotments which meet all Rangeland Health and monitoring standards.	Management	No change	No change	No change	No change	No change
	Active Use	No change	No change	No change	No change	No change
	Monitoring	By MIC priorities	Minimal monitoring	Minimal monitoring	Minimal monitoring	Minimal monitoring
	Range Improvements	As proposed, site specific. Not tied to rangeland health.	Moderate priority overall.	Moderate priority overall.	Moderate priority overall.	Low priority overall.
Allotments which meet Rangeland Health Standards, but where monitoring indicates a need for action.	Management	Allotment or site specific as issues identified	Allotment specific actions in response to resource concerns	Allotment specific actions in response to resource concerns	Allotment specific actions in response to resource concerns	Allotment specific actions in response to resource concerns
	Active Use	No change in authorized use.	No change in authorized use	No change in authorized use.	No change in authorized use.	No change in authorized use.
	Monitoring	Continue MIC (Maintain, Improve, Custodial) priorities as listed in older land use plans.	Monitoring sufficient to detect changing conditions and response to needed actions.	Monitoring sufficient to detect changing conditions and response to needed actions.	Monitoring sufficient to detect changing conditions and response to needed actions.	Monitoring sufficient to detect changing conditions and response to needed actions.
	Range Improvements	On a site specific basis. Not prioritized.	Priority on response to site specific resource needs and vegetation restoration.	Priority on response to site specific resource needs and vegetation restoration.	Priority on response to site specific resource needs and vegetation restoration.	Priority on response to site specific resource needs and vegetation restoration.

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

Resource or Resource Use		Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Livestock Grazing Management						
Allotments which fail to meet Riparian Health Standard, but meet Upland Health Standards. Allotments: <i>Death Hollow</i> <i>Ford Well</i> <i>Rock Creek-Mudholes</i>	Management	No change. Existing range improvements would be maintained to exclude livestock from riparian areas.	Allotment specific management changes would be made with emphasis on exclusionary range improvements.	Allotment specific management changes would be made to include seasonal closures, season of use changes and range improvements.	Allotment specific management changes would be made to include seasonal closures, season of use changes and range improvements.	Grazing suspension until Standards are met. Prior to grazing use, complete new assessment to determine active use level and management direction.
	Active Use	No change in authorized active use.	No change in authorized active use.	No change in authorized active use.	No change in authorized active use.	Livestock Grazing would be temporarily suspended until the Standard for Riparian is met.
	Riparian Monitoring	PFC done prior to allotment evaluations.	Higher priority for riparian monitoring.	Annual riparian monitoring a high priority	Annual riparian monitoring a high priority	Annual riparian monitoring a high priority
	Range Improvements	As proposed, on a site specific basis.	High priority on exclusionary structures.	High priority on exclusionary structures. Medium priority for improved water distribution.	High priority on exclusionary structures. Medium priority for improved water distribution.	As proposed, on a site specific basis.

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

Resource or Resource Use		Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Livestock Grazing Management Continued						
Allotments which fail to meet Upland Health Standards (most also failing Riparian Standard) Allotments: <i>Collet</i> <i>Mollies Nipple</i> <i>School Section</i> <i>Soda</i> <i>Upper Paria</i> <i>Vermilion</i>	Management	Allotment-by-allotment. Allotments would continue to fail Standards.	Allotment specific management changes would include rest, rotational grazing systems, changes in grazing seasons.	Allotment specific management changes would include rest, changes in grazing seasons, rotational grazing systems, and temporary suspensions in active use for restoration.	Grazing suspension until Standards are met. Before re-authorizing grazing, complete new allotment evaluation to determine active use level and management direction.	Grazing suspension until Standards are met. Before reauthorizing grazing, complete new allotment evaluation to determine active use level and management direction.
	Active Use	No change in authorized active use.	No change in active use. Temporary non-use at discretion of permittee subject to grazing regulations.	Allotment evaluation to determine new stocking level following restoration.	Livestock grazing would be temporarily suspended until upland Standards are met.	Livestock grazing would be temporarily suspended until upland and riparian Standards are met.
	Monitoring	By MIC priorities	Higher priority, but standard monitoring cycle.	Allotment evaluation to determine new stocking level. Standard, approved monitoring procedures.	Allotment evaluation to determine new stocking level. Standard, approved monitoring procedures.	Allotment evaluation to determine new stocking level. Standard, approved monitoring procedures.
	Range Improvements	On a site specific basis. Not prioritized.	High priority for fences and water improvements to improve distribution. High priority on vegetation restoration projects.	Moderate priority for fences and high priority for water improvements based upon use pattern maps. High priority for vegetation restoration.	High priority for fences and water improvements to improve distribution. High priority for vegetation restoration.	Moderate priority for vegetation restoration. .

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

Resource or Resource Use	Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Relinquishment					
Reassignment of Relinquished AUMs and forage made available	BLM will follow the guidelines given for the process in the Washington Office (WO) Instruction Memorandum (IM) on processing relinquishments (refer to Appendix 7).	BLM will follow the guidelines given for the process in the Washington Office (WO) Instruction Memorandum (IM) on processing relinquishments (refer to Appendix 7).	BLM will follow the guidelines given for the process in the Washington Office (WO) Instruction Memorandum (IM) on processing relinquishments (refer to Appendix 7).	BLM will follow the guidelines given for the process in the Washington Office (WO) Instruction Memorandum (IM) on processing relinquishments (refer to Appendix 7).	BLM will follow the guidelines given for the process in the Washington Office (WO) Instruction Memorandum (IM) on processing relinquishments (refer to Appendix 7).
Allotment Specific Proposals (Allotments which fail to meet upland Standards)					
Collet	Continue current management.	No change in grazing management. Temporary closure Right Hand Collet Canyon.	Same as Alternative B.	Temporarily suspend grazing use until Standards are met.	Same as Alternative D.
Mollies Nipple	Continue current management.	Authorize use at existing active use level. Implement six-pasture rotation.	Restore production in four seedings. Follow BLM manual direction of rest for at least two growing seasons then conduct allotment evaluation to determine new stocking level. Create limited use Buckskin Gulch Pasture east of House Rock Valley Road.	Temporarily suspend use until Standards are met. Create limited use Buckskin Gulch Pasture east of House Rock Valley Road. Restore seedings. Allotment evaluation to determine new stocking level. Standard, approved monitoring procedures.	Same as Alternative D.

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

Resource or Resource Use	Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Allotment Specific Proposals (Allotments which fail to meet upland Standards), Continued					
School Section	Continue current management.	Authorize use at existing active use level. Implement two pasture rotation. Restore seeding then conduct allotment evaluation to determine new stocking level.	Same as Alternative B.	Temporarily suspend use until Standards are met. Restore seeding then conduct allotment evaluation to determine new stocking level.	Temporarily suspend use until Standards are met.
Vermilion	Continue current management.	Authorize use at existing levels, but with a revised Spring rest. Restore failed seedings.	Restore seeded pastures. Follow BLM manual direction of rest for two growing seasons. Allotment evaluation to determine new stocking level upon completion of restoration. Standard, approved monitoring procedures. Implement pasture rotation with rest or deferment. Create three-pasture deferred rotation on Nephi pasture.	Temporarily suspend use until Standards are met. Develop new AMP with pasture rotation and Spring rest. Create three-pasture deferred rotation on Nephi pasture. Allotment evaluation to determine new stocking level. Standard, approved monitoring procedures.	Same as Alternative D.

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

Resource or Resource Use	Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Allotment Specific Proposals (Allotments which fail to meet riparian Standards)					
Death Hollow	Continue current management.	Limit season of use to no later than 3/31.	Limit season of use to no later than 3/31. Restrict livestock access into upper Little Death Hollow and Wolverine Creek at the beginning of the narrows near the heads of the canyons.	Same as Alternative C.	Temporarily suspend livestock use. Upon reaching riparian Standards, limit season of use to no later than 3/31. Restrict livestock access into upper Little Death Hollow and Wolverine Creek utilizing existing recreation protection fence.
Ford Well	Continue current management.	No change from current authorized use. Riparian protection structures.	Same as Alternative B.	Same as Alternative B.	Temporarily suspend livestock grazing until Rangeland Health Standards are achieved.
Rock Creek-Mudholes	Continue current management.	No change from current authorized use. Riparian protection structures.	Same as Alternative B.	Same as Alternative B.	Temporarily suspend livestock grazing until Rangeland Health Standards are achieved. Closure of near relic area on southern tip of Grand Bench reducing allotment by 72 AUMs as per GCNRA.

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

Resource or Resource Use	Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Allotment Specific Proposals (Allotments which meet Standards)					
Big Bowns Bench	Continue current management.	Continue current management.	Same as Alternative B.	Close the remaining portions of the allotment to livestock grazing; a reduction of 750 AUMs.	Same as Alternative D.
Circle Cliffs	Continue current management	Limit season of use in Upper Gulch Pasture to 3/15.	Same as Alternative B.	Same as Alternative B.	Same as Alternative B.
Clark Bench	Continue current management.	Adjust season of use to 11/1 to 3/31. Create a Dive Pasture where grazing use would only be authorized when snow provided water availability.	Same as Alternative B.	Same as Alternative B.	Same as Alternative B.
Coyote	Continue current management.	Re-authorize livestock grazing at current active use level. Seeded pastures requiring restoration will remain open with reduced use until restoration work commences. Allotment evaluation to determine new stocking level upon completion of restoration. Standard, approved monitoring procedures.	Temporary non-use or suspensions of 588 active AUMs in the Sand Gulch and Five Mile pastures until restoration can be accomplished. Allotment evaluation to determine new stocking level upon completion of restoration. Standard, approved monitoring procedures.	Same as Alternative C.	Same as Alternative C.

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

Resource or Resource Use	Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Allotment Specific Proposals (Allotments which meet Standards), Continued					
King Bench Allotment - King Bench Pasture and the Lower Gulch	Continue current management.	Continue current management.	Develop a pasture use system in which the Gulch is not grazed after 2/28.	Same as Alternative C.	Same as Alternative C.
Lake	Continue current management.	Continue current management.	Continue current management.	Continue current management.	Close Navajo Point to grazing as per GCNRA.
Last Chance	Continue current management.	Continue current management.	Continue current management.	Continue current management.	Close a large a portion of the Winter Pasture accessed through East Rogers Canyon.
Willow Gulch Allotment - Upper Falls and Calf Creek riparian areas	Continue current management.	Continue current management.	Same as Alternative B.	Same as Alternative B.	Close Calf Creek to livestock grazing between the Upper and Lower Falls. Provide alternate water(s).

CHAPTER 2 ALTERNATIVES

Table 2-2 Summary of the Alternatives Continued

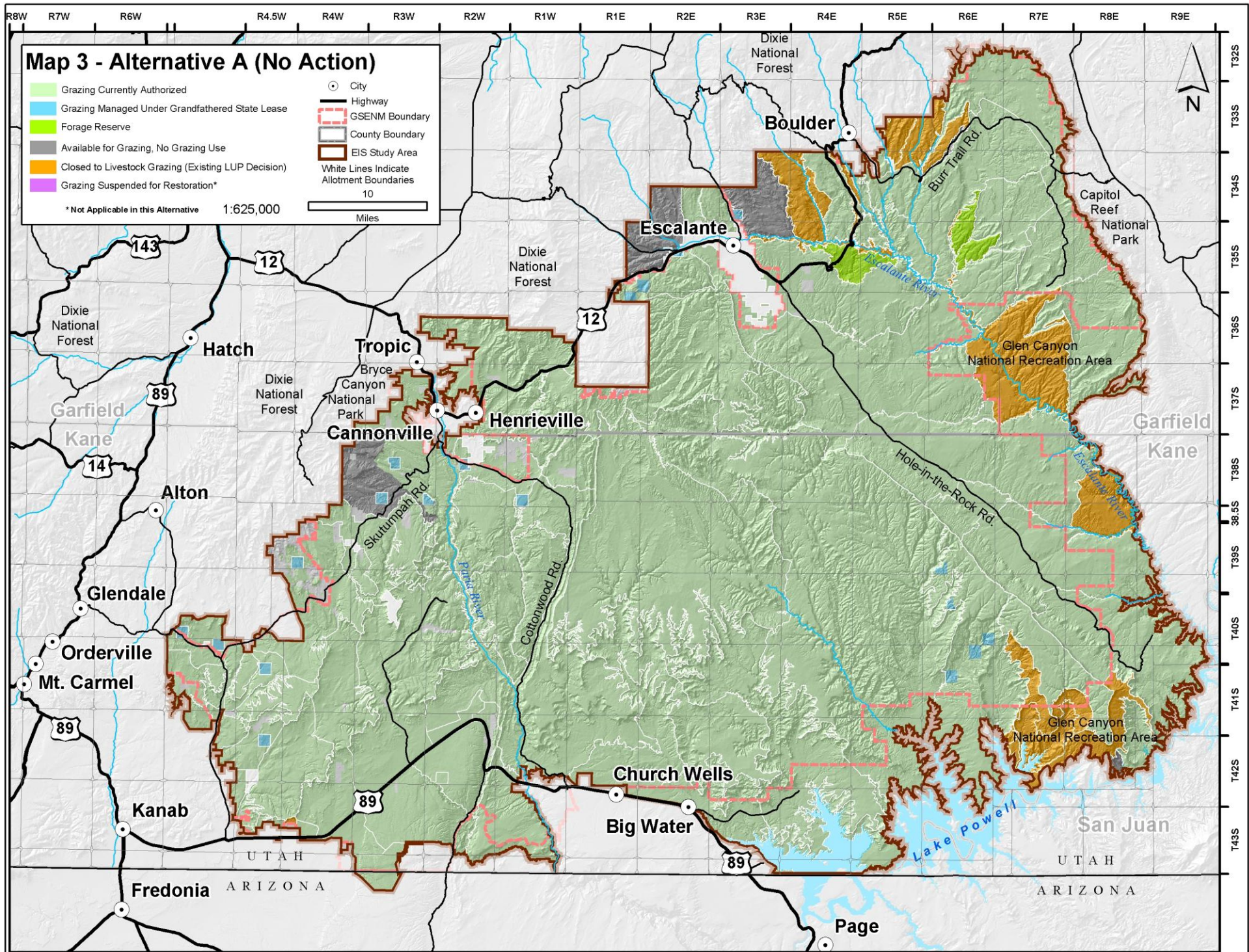
Resource or Resource Use	Alternative A No Action	Alternative B	Alternative C Management Preferred	Alternative D	Alternative E
Threatened and Endangered Wildlife Management Proposals					
Southwest Willow Flycatcher (SWFL) – season of use	No seasonal use restrictions for livestock grazing within SWFL habitats.	No seasonal use restrictions for livestock grazing within SWFL habitats.	Livestock grazing would only be authorized from 11/1 to 2/28 in suitable SWFL habitat.	Livestock grazing would only be authorized from 11/1 to 2/28 in suitable SWFL habitat.	Livestock grazing would only be authorized from 11/1 to 2/28 in suitable or potentially suitable SWFL habitat.
Southwest Willow Flycatcher (SWFL) – plant utilization	Utilization standards for current year's growth are 50% for grass and 40% for woody species.	Utilization standards for current year's growth are 50% for grass and 40% for woody species.	Within SWFL habitat plant utilization of current year's growth would not exceed 35% for grass and 40% for shrubs.	Within SWFL habitat plant utilization of current year's growth would not exceed 35% for grass and 40% for shrubs.	Within SWFL habitat plant utilization of current year's growth would not exceed 35% for grass and 40% for shrubs.
Mexican spotted owl – season of use in Protected Activity Centers (PACS)	No season of use restrictions.	No season of use restrictions.	No livestock grazing would be authorized within PACS during breeding and nesting	No livestock grazing would be authorized within PACS during breeding and nesting.	No livestock grazing would be authorized within PACS during breeding and nesting.

CHAPTER 2 ALTERNATIVES

Table 2-3 AUM Numbers by Allotment and Alternative

Allotment Name		AUMS in Current Actual Use		Alt. A	Alt. B	Alt. C		Alt. D		Alt. E	
						Initial	Potential	Initial	Potential	Initial	Potential
68 Allotments (unchanged, all alternatives)		55,833		55,833	55,833	55,833	55,833	55,833	55,833	55,833	55,833
Collet		97		97	97	97	97	0	97	0	97
Coyote		2,044		2,044	2,044*	1,456	2,044	1,456	2,044	1,456	2,044
Ford Well		328		328	328	328	328	328	328	0	328
Soda		2,798		2,798	2,798	2,798	2,798	0	2,798	0	2,798
Lake		1,310		1,310	1,310	1,310	1,310	1310	1310	1,016	1,016
Mollies Nipple		3,862		3,862	3,862	3,307	3,862	0	3,862	0	3,307
School Section		102		102	102	102	102	0	102	0	102
Upper Paria		2,780		2,780	2,780	2,780	2,780	0	2,780	0	2,780
Vermilion		2,849		2,849	2,849	2,065	2,849	0	2,849	0	1,813
Death Hollow		1,057		1,057	1,057	1,057	1,057	1,057	1,057	0	1,057
Rock Creek-Mudholes		2,173		2,173	2,173	2,173	2,173	2,173	2,173	0	2,101
Varney Griffin		0		0	50	50	50	50	50	50	50
Big Bowns Bench		750		750	750	750	750	0	0	0	0
Willow Gulch		474		474	474	474	474	474	474	474	474
Active Use Total		76,457		76,457	76,507	74,580	76,507	62,681	75,757	58,829	73,800

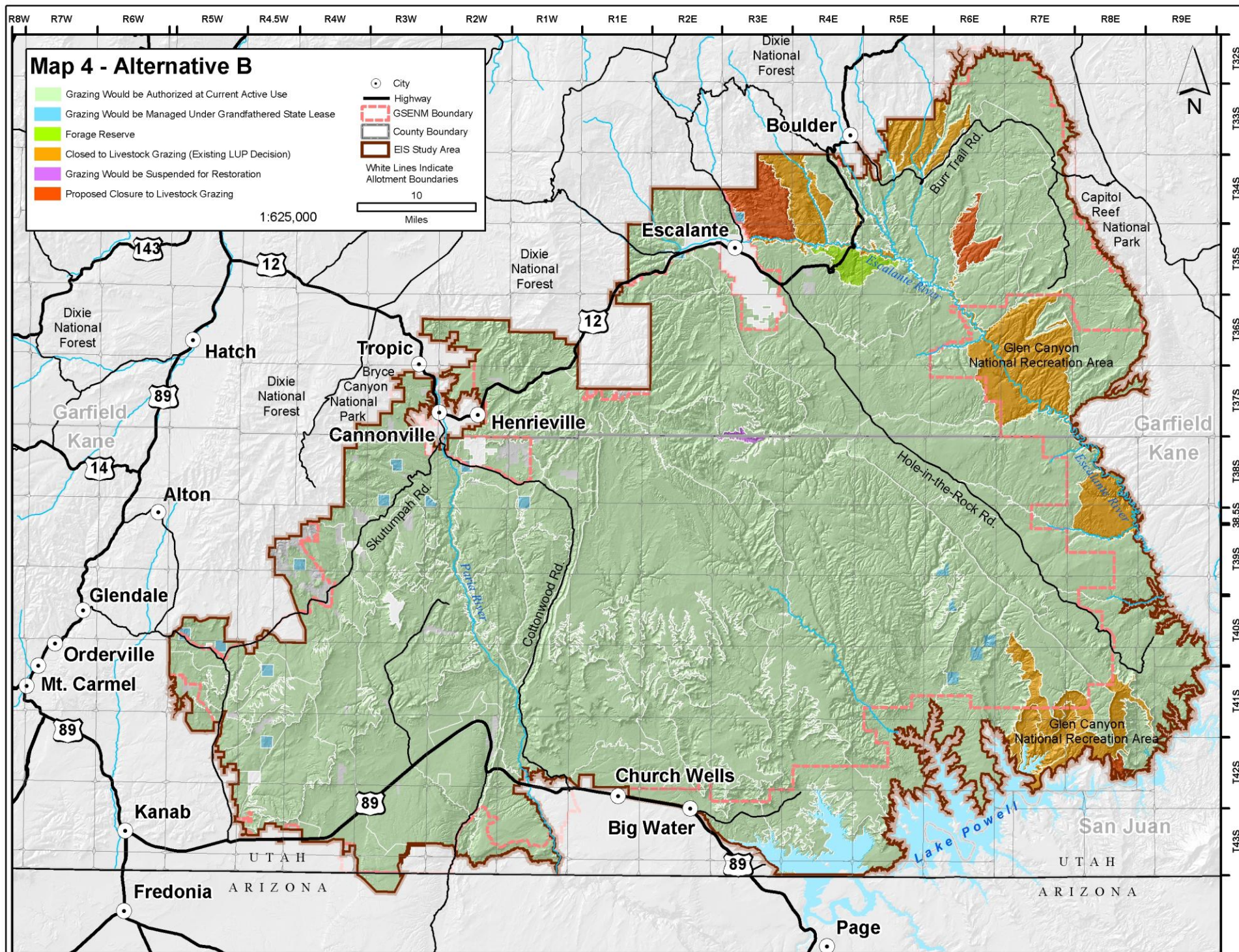
*If restoration is initiated this allotment would be temporarily reduced to 1,456 AUMs.



CHAPTER 2

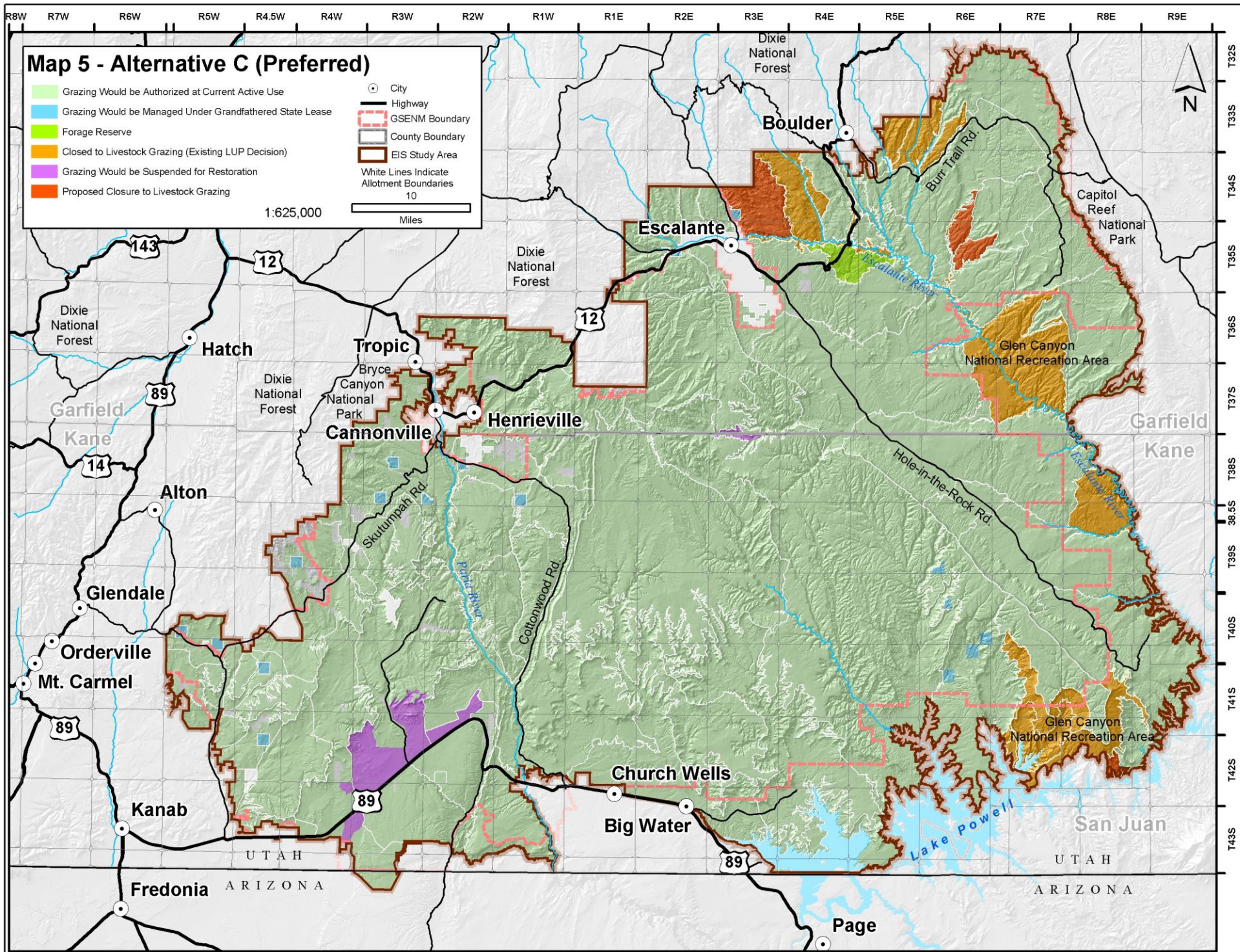
ALTERNATIVES

Page Intentionally Left Blank



CHAPTER 2 ALTERNATIVES

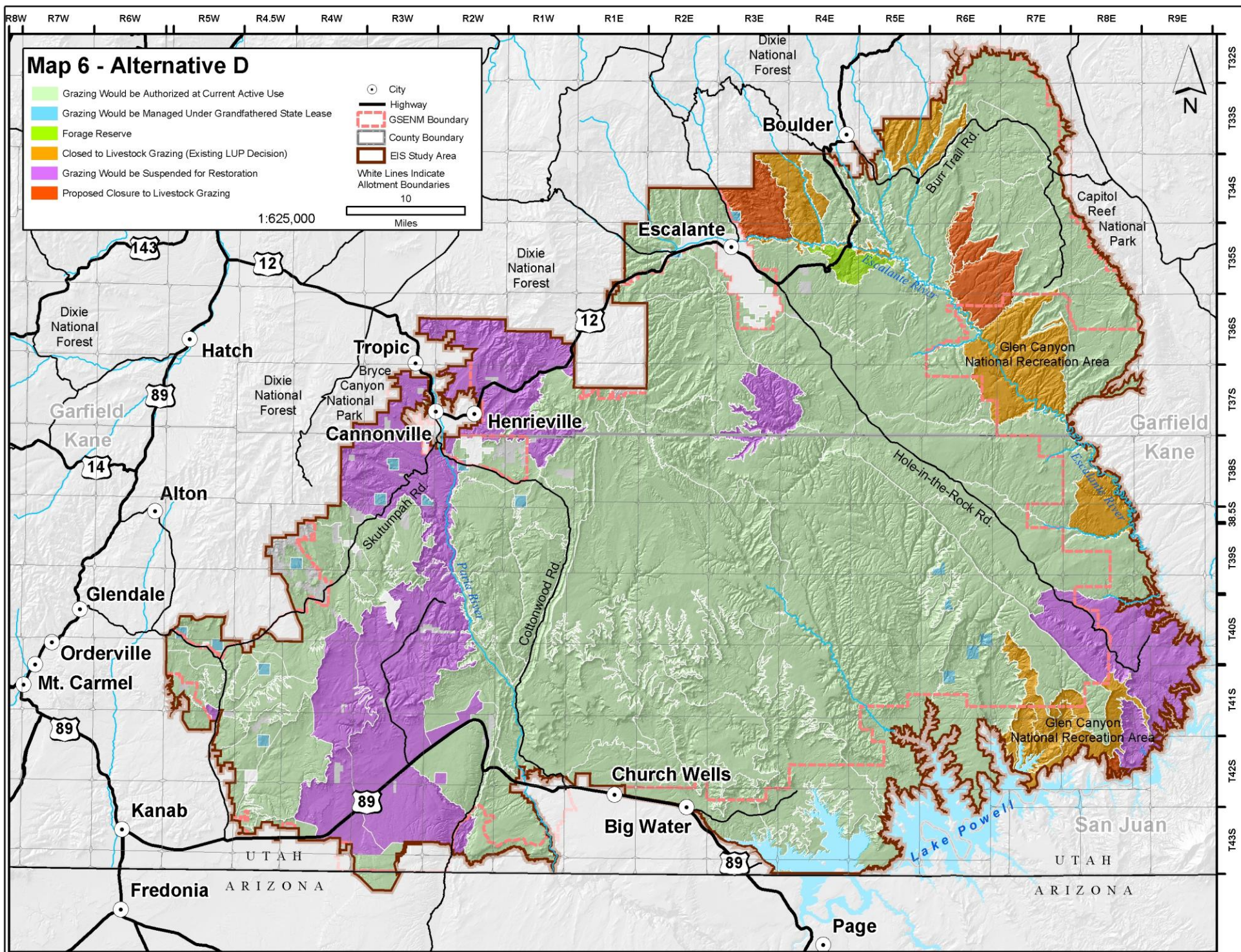
Page Intentionally Left Blank



CHAPTER 2

ALTERNATIVES

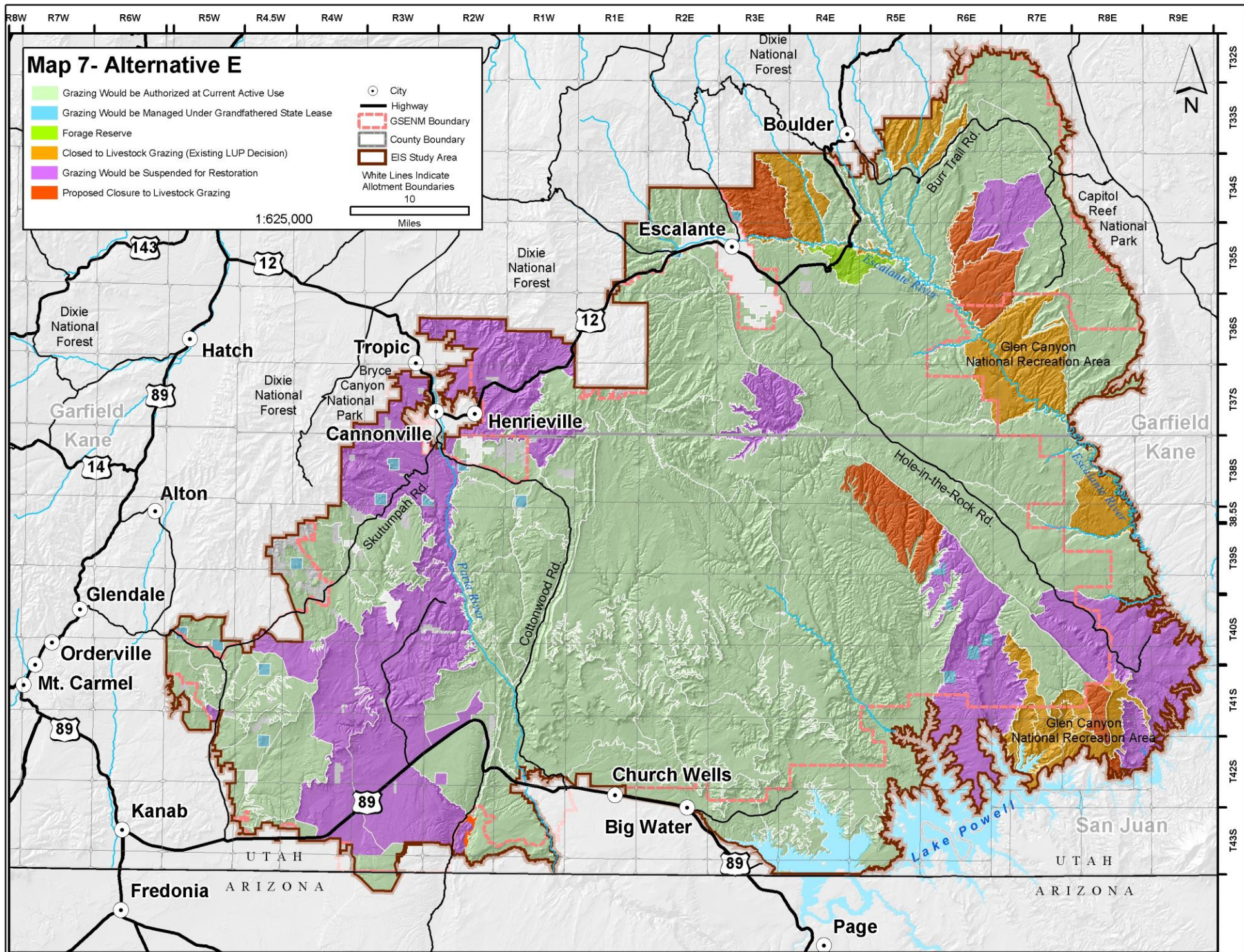
Page Intentionally Left Blank



CHAPTER 2

ALTERNATIVES

Page Intentionally Left Blank



CHAPTER 2

ALTERNATIVES

Page Intentionally Left Blank

CHAPTER 2

ALTERNATIVES

ALTERNATIVES ANALYZED IN DETAIL

ALTERNATIVE A - No Action

ALTERNATIVE SUMMARY

Livestock management would continue at the present authorized active use levels with minimal, if any, changes to grazing permit terms and conditions. Changes to existing management would be limited to short-term adjustments commonly associated with on-going allotment administration such as requests for change of season of use, modification to pasture rotation use, voluntary non-use, and temporary non-renewable use. Temporary suspensions may be necessary in areas selected for forage restoration projects. Currently closed areas would remain closed to livestock grazing, but no additional closures would be proposed. Range improvements would be considered on a case-by-case basis.

This Alternative would not be in compliance with existing regulations if minimal changes to grazing permit terms and conditions were not effective at improving the condition of allotments currently failing to achieve Rangeland Health (Standards) 43 CFR 4180.

LIVESTOCK GRAZING MANAGEMENT ACTIONS

Authorized livestock grazing

Continue to authorize 76,457 AUMs of active use livestock grazing. Total permitted use would remain at 106,138 AUMs, with 29,681 AUMs suspended use.

All allotments would be authorized for livestock grazing at current active use. Management changes in response to monitoring would continue to use routine grazing management techniques such as season of use, stocking modifications to allow for forage and precipitation fluctuations, pasture rotations, reduced use periods when existing utilization guidelines are reached, along with temporary non-use during restoration projects. No long-term closures or active use reductions would take place. Current restrictions on grazing which would be continued in this alternative are:

Grazing restrictions

Temporary grazing restrictions would be limited to areas of concern determined through monitoring and in response to events such as drought, fire and rangeland restoration projects. Areas undergoing restoration would be rested for at least two growing seasons.

Allotment Specific Management Actions

Under the No Action Alternative current management practices would be continued on all allotments except as noted above. Management changes would be considered on a case-by-case basis as proposed by either the permittee or BLM Rangeland Management Specialists.

Monitoring

Monitoring would continue to be prioritized by the MIC (Maintain, Improve, Custodial) categories assigned in the existing Management Framework Plans.

CHAPTER 2 ALTERNATIVES

Rangeland Improvements

Existing rangeland improvements would be maintained (where they continue to serve their intended purpose(s)), or removed if necessary. Proposed new rangeland improvements would continue to be considered on a case-by-case basis.

WILDLIFE MANAGEMENT ACTIONS

Southwest Willow Flycatcher – season of use standards

Season of use grazing restrictions would not be implemented

Southwest Willow Flycatcher – plant utilization standards

Current utilization standards of 50% for herbaceous vegetation during the spring/summer season and 40% for browse species would continue.

Mexican Spotted Owl – season of use in Protected Activity Centers (PACS)

Season of use grazing restrictions would not be implemented.

ALLOTMENT SPECIFIC MANAGEMENT ACTIONS COMMON TO ALTERNATIVES B, C, D, & E

Circle Cliffs

Upon re-authorizing livestock grazing, alternate year spring/fall grazing would be required in the Upper Gulch Pasture. The season of use for the Upper Gulch Pasture would be limited to no later than March 15th.

Clark Bench

- Maintain the availability of the allotment for livestock grazing.
- Adjust season of use to November 1st to March 31st.
- Create a Dive Pasture where grazing use would only be authorized when snow provided water availability.
- Apportion AUMs between the pastures designating 938 AUMs to the current Clark Bench “pasture” and 300 AUMs to the new Dive Pasture.

The allotment is meeting Rangeland Health Standards. Use during the winter grazing season for the past several years is resulting in an upward trend. Portions of the allotment are only usable for grazing when winter rain or snow provides water in potholes.

Future Project Implementation:

- Install gap fencing (total approximately 1 mile) to create the Dive Pasture to be used when winter snows provide sufficient water availability.
- Repair the existing water catchment to limit use of and reliance on Calf Spring.
- Take necessary steps to keep livestock off the impoundment berm at Calf Spring and study the feasibility of pumping water away from Calf Spring for livestock.

CHAPTER 2 ALTERNATIVES

ALTERNATIVE B

ALTERNATIVE SUMMARY

Grazing management would be modified only as necessary to begin the process of making progress towards meeting Rangeland Health Standards in areas not now meeting Standards and to meet the goals and objectives of the land use plan. Emphasis would be placed on reducing grazing impacts by improving distribution and season-of-use of livestock. Management changes would consist of routine techniques such as modified levels and timing of grazing use. Temporary suspensions will only be proposed when other options fail to produce improvements in range condition. Where reduced active use is warranted, temporary non-use or temporary suspensions would be used in lieu of reductions in permitted active use.

This alternative would place a high priority on reducing impacts through the use of range improvements. Improvements would be proposed which improve livestock distribution (fences, and water developments), reduce grazing pressure in areas which fail to meet Standards (exclosures or exclusionary devices), or restore lost forage (seeding restoration).

All items listed under **Management Actions Common to All Alternatives** are incorporated by reference.

LIVESTOCK GRAZING MANAGEMENT ACTIONS

Authorized livestock grazing

Initially authorize 76,507 AUMs of active use livestock grazing. Total permitted use would be 106,188 AUMs, including an allocation of 50 AUMs for Varney Griffin allotment, with 29,681 AUMs suspended use

Management changes in response to monitoring and those designed to move areas towards meeting Rangeland Health Standards would utilize routine grazing management techniques such as season of use modifications, pasture rotations, reduced use periods when utilization guidelines are reached, and temporary closures during restoration projects rather than long-term closures or actual use reductions.

For some allotments, proposed management actions and implementation actions have already been developed and these are listed below. Appendix 1 describes the proposed management for individual allotments in greater detail.

Grazing restrictions

Temporary grazing restrictions would be limited to areas of concern determined through monitoring and in response to events such as drought, fire and rangeland restoration projects. Areas undergoing restoration would be rested for at least two growing seasons.

Allotment Specific Management Actions

[Livestock grazing use in allotments listed below varies in at least one alternative. The allotments not listed would have livestock grazing re-authorized at current active use levels in all alternatives.]

CHAPTER 2

ALTERNATIVES

Big Bowns Bench

No change from currently authorized active use.

Collet (same as Alternative C)

- Re-authorize livestock grazing at current active use level.
- Temporarily exclude livestock grazing from the portion of the Right Hand Collet Canyon that does not meet Rangeland Health Standards until Standards are met.

Due to an allotment boundary fence problem, livestock from the Upper Cattle allotment have been using the lower end of Right Hand Collet within the Collet allotment.

Relocating the allotment boundary fence to the correct location and eliminating use by livestock from the adjacent allotment is expected to result in recovery of this area. The permittee supports this action.

Future Project Implementation:

- Construct an allotment boundary fence at the correct location.
- Install gap fencing to create three pastures to be used in rotation rather than every year.
- Use limited to two pastures until Right Hand Collet riparian area recovers.

Coyote

- Re-authorize livestock grazing at current active use level.
- Seeded pastures requiring restoration will remain open with reduced use until restoration work commences.

Implementation Action:

Restore rangeland seedings; place in temporary non-use for at least two growing seasons. Livestock grazing will be considered as long as the seeding is moving toward desired plant community.

Death Hollow

- Re-authorize livestock grazing at current active use level.
- Limit the season of use for livestock grazing to no later than March 31st.
- Restrict livestock access into upper Little Death Hollow and Wolverine Creek at the narrows near the head of the canyons.

While most livestock are usually off this allotment by March 31st, a small number are often left through May 15th. The BLM range staff considers use between March 31st and May 15th as a contributing factor in the allotment's not meeting Rangeland Health Standards, particularly as it occurs during the critical growing season for spring grasses. If this period of use is terminated the causal factor in not meeting Standards would be eliminated. No AUM adjustments are proposed.

Restricting access into the canyons will prevent livestock from being "driven" into the narrows to avoid hikers.

CHAPTER 2

ALTERNATIVES

Future Project Implementation:

- Construct drift fences to restrict livestock access into upper Little Death Hollow and Wolverine Creek narrows.
- Construct riparian protection fences.

Ford Well (same as Alternatives C & D)

No change from currently authorized active use. Maintain the Ford Well Spring protection fence, repair/replace collection and storage system.

Future Project Implementation:

Construct a fence, collection system and install a trough at Old Corral Spring.

Soda (same as Alternative C)

No change from currently authorized active use.

Future Project Implementation:

BLM and Glen Canyon NRA would fence springs while maintaining livestock water access.

King Bench

No change from currently authorized active use.

Lake

No change from currently authorized active use.

Future Project Implementation:

- Riparian area protection on a site-by-site basis.

Last Chance

No change from currently authorized active use.

Mollies Nipple

- No change to currently authorized active use, however, voluntary non-use would continue until restoration is completed.
- Upon successful restoration of the seeded pastures, establish a new authorized use level based on the restored forage (potentially 3,862 active use AUMs for the allotment).
- Rest two of the five transition pastures in the spring (approximately April 1st to May 31st) in order to meet the spring growing requirements of emerging vegetation. Rest two transition pastures in the fall (October 1 – November 30) alternating years with the other two transition pastures.
- Summer (approximately June 1 to September 30) and winter (approximately December 1 to March 31) use would continue as presently authorized.
- Initiate seven-pasture deferred rest rotation.
- Control the season of use in the newly created Gulch Pasture east of the House Rock Valley Road to resolve or reduce recreational impacts.

CHAPTER 2

ALTERNATIVES

- Create a “new” Buckskin Gulch Pasture in the southeast corner of the Buckskin Pasture above the Buckskin Narrows.
- When conditions allow, grazing could be authorized in the new pasture from December 1st to February 28th every other year.

Following the developed seven-pasture deferred rotation plan is necessary to provide for periodic pasture rest and improved plant vigor. In the past, failure to fully implement the rotation plan, and the extended periods of drought, has resulted in a decline in the condition of the seeded pastures. The seeded pastures, which have accounted for 43% of the allotment’s AUMs in the past, are being restored.

The Mollies Nipple allotment experiences conflicts between livestock use and hikers in the Buckskin Narrows. Because livestock congregate at the small seep above the Narrows, there is a tendency for them to be “pushed” down the Narrows as they try to avoid hikers. Additionally, the small seep in the area does not provide sufficient water for livestock purposes and is being impacted by livestock use. The area concerned is dominated by a large gravelly wash bottom and does not produce sufficient forage for annual grazing use. This alternative would manage the season of use and place protective structures for livestock control and spring protection in Buckskin Narrows to resolve the recreational conflict and allow restoration of the riparian area.

Implementation Actions:

- Rock House, Jenny Clay, Blue Spring, and Telegraph Pastures would be placed in temporary non-use as they are treated.
- Resume livestock grazing after at least two growing seasons and monitoring determines forage availability and appropriate active use upon restoration of seedings.
- Develop an interim pasture rotation schedule while the treated pastures are in the restoration phase.

Future Project Implementation:

- Split Nipple Pasture into East Nipple and West Nipple Pastures. Initiate deferred summer rotation using the two pastures generally from 6/1 to 7/31 and 8/1 to 9/30.
- Deferred use of the five transition pastures by alternating use to ensure spring and fall rest period every other year. Generally 4/1 - 5/15, and 10/1 – 11/30.
- Continue winter use of Buckskin Pasture. Generally 12/1 to 3/31.
- Construct 3.7 miles of fence along the House Rock Valley Road, and livestock drift and spring protection fences in the Gulch pasture.
- Develop alternate water sources in the Buckskin Pasture in the vicinity of the House Rock Valley Road, the south western half of Buckskin, and Deer Trails area of the Nipple Pasture.
- Summer (approximately June 1 to September 30) and Winter (approximately December 1 to March 31) use would continue as presently authorized.

Rock Creek-Mudholes

No change from currently authorized active use.

CHAPTER 2

ALTERNATIVES

School Section (same as Alternative C)

- No change from currently authorized active use.
- Divide the allotment into two pastures by fencing the old seeding from the untreated area of the allotment. Implement a two pasture deferred grazing system on the allotment, which would defer the early spring grazing on one pasture each grazing season.
- Restore the old seeding. The area that would be reseeded would rest from livestock grazing for at least 2 years

Upper Paria

No change from currently authorized active use.

Future Project Implementation:

Manage South Pasture within Upper Paria allotment for emergency use.

Seeded pastures requiring restoration will remain open with reduced use until restoration work commences, and then will be placed in temporary non-use for at least two years until restoration objectives are met.

Vermilion

- Re-authorize livestock grazing at current active use level.
- Change the season of use to April 16th through May 20th and June 1st through February 28th.
- Seeded pastures requiring restoration will remain open with reduced use until restoration work commences, and then will be placed in temporary non-use for at least two years until restoration objectives are met.

Implementation Action:

Restore seeded pastures RCA1 and Fossil Wash.

Willow Gulch

Re-authorize livestock grazing at current active use level.

Implementation Actions

Monitor use levels and riparian conditions adjacent to Upper Calf Creek Falls and in Calf Creek above the Lower Falls and adjust or restrict use based on riparian conditions.

Priorities for Monitoring

Rangeland monitoring would continue using the existing monitoring schedule. A higher monitoring priority would be placed upon allotments which do not meet standards, while a lower priority would exist for allotments with no identified concerns. No GSENM-wide priorities would be set; monitoring priorities would be set on an allotment specific basis to respond to identified issues.

Rangeland Improvements

Existing rangeland improvements would be maintained where they continue to serve their intended purpose(s), or removed if necessary. Proposed new rangeland improvements would

CHAPTER 2

ALTERNATIVES

continue to be considered on a case-by-case basis, with emphasis on improving distribution, or removing grazing pressure from riparian areas which fail to meet Standards.

A factor in not meeting Rangeland Health Standards and Proper Functioning Condition for many riparian (spring) areas is the lack of adequate maintenance of protective fencing around water sources. Many fences were found to be down due to age, flood damage, or livestock pressure. Repairs to these protective fences is expected to provide the action(s) necessary to reverse site deterioration and lead to these areas making progress towards, and eventually meeting, Rangeland Health Standards and Proper Functioning condition.

Implementation Actions Proposed:

- Repair fencing projects where field evaluations have identified maintenance needs.
- Evaluate all other projects for maintenance needs and functionality.
- Decommission projects no longer required or functioning.

WILDLIFE MANAGEMENT ACTIONS

Southwest Willow Flycatcher – season of use standards

Season of use grazing restrictions would not be implemented.

Southwest Willow Flycatcher – plant utilization standards

Current utilization standards in suitable habitat of 50% for herbaceous vegetation during the spring/summer season and 40% for browse species would continue.

Mexican Spotted Owl – season of use in Protected Activity Centers (PACS)

Season of use grazing restrictions would not be implemented.

CHAPTER 2 ALTERNATIVES

ALTERNATIVE C – PREFERRED ALTERNATIVE

ALTERNATIVE SUMMARY

Grazing management would be modified with priority on restoring rangeland health while providing research opportunities in restoration and monitoring success. Emphasis will be placed on modifying livestock management on allotments which fail multiple Standards and where rangeland monitoring shows no indication of positive change. For planning purposes and the estimation of future uses, an assumption has been made that restoration actions would restore forage availability to previous levels. However, allotment specific evaluations would determine the actual active use levels upon successful restoration.

Site-specific measures to correct identified problems would be implemented in allotments which did not meet the riparian Standard, or which show declining conditions.

Research opportunities concerning vegetation restoration would be vigorously pursued, with emphasis on restoring failed seedings and riparian areas. Coincident with this will be studies involving monitoring techniques. Specific attention will be on determining whether site specific upland stubble height standards have use as a management tool. Implementation monitoring would also be a high priority.

All items listed under **Management Actions Common to All Alternatives** are incorporated by reference.

LIVESTOCK GRAZING MANAGEMENT ACTIONS

Authorized livestock grazing

Initially authorize 74,580 AUMs of active use livestock grazing. Following successful rangeland restorations and evaluations that show allotments to be meeting Standards and forage to be available, active use AUMs may be increased to 76,507. Total permitted use would be 106,188 AUMs, including an allocation of 50 AUMs for Varney Griffin allotment.

Livestock grazing in Allotments which met Rangeland Health Standards

Rangeland Health in the 73 allotments listed below were evaluated as meeting Rangeland Health Standards. Management changes in response to monitoring would involve routine grazing management techniques such as season of use modifications, pasture rotations, reduced use periods when utilization guidelines are reached, and temporary closures during restoration projects.

CHAPTER 2 ALTERNATIVES

Table 2-4 Proposed Livestock Grazing in Allotments Meeting RLH Standards (Alternative C)

Allotment	Active Use		Allotment	Active Use	
	Initial	Potential		Initial	Potential
Alvey Wash **	1,424	1,424	Long Canyon *	289	289
Big Bowns Bench *	750	750	Locke Ridge (State)	27	27
Big Horn **	3,515	3,515	Lower Hackberry	435	435
Black Ridge	903	903	Last Chance	4,289	4,289
Black Rock	408	408	Lower Cattle	7,488	7,488
Black Rock (State)	64	64	Lower Warm Creek	225	225
Boot	45	45	Main Canyon (State)	14	14
Boulder Creek	80	80	Moody	909	909
Bull Run (State)	5	5	Moyle C. Johnson	53	53
Bunting Trust	16	16	Mud Springs **	277	277
Calf Pasture	176	176	Neaf	9	9
Circle Cliffs**	1,050	1,050	Nipple Bench	993	993
Clark Bench *, **	1,238	1,238	Pine Creek	144	144
Cockscomb	36	36	Pine Creek (State) **	27	27
Cottonwood	3,153	3,153	Pine Point	365	365
Coyote**	1,456	2,044	Round Valley	522	522
Deer Creek	358	358	Roy Willis	9	9
Deer Range **	231	231	Rush Beds **	252	252
Deer Springs Point **	503	503	Second Point **	69	69
Deer Springs (State)	82	82	Second Point (State)	29	29
Dry Valley	677	677	Sink Holes	154	154
Dry Valley (State)	22	22	Slick Rock State	24	24
Five Mile Mountain**	385	385	South Fork	12	12
First Point	410	410	Swallow Park**	1,068	1,068
Flood Canyon	--	--	Timber Mountain	426	426
Fortymile Ridge	4,290	4,290	Upper Cattle **	8,158	8,158
Hall Ranch	12	12	Upper Hackberry	654	654
Granary Ranch	70	70	Upper Warm Creek **	1,638	1,638
Haymaker Bench	100	100	Varney Griffin	50	50
Johnson Canyon **	274	274	Wagon Box Mesa	637	637
Headwaters**	3,822	3,822	Wahweap	491	491
Hells Bellows	44	44	White Rock	60	60
Johnson Lakes **	495	495	White Sage **	76	76
Johnson Point	135	135	Wide Hollow *	353	353
King Bench *	1,515	1,515	Willow Gulch *	474	474
Lake Powell	20	20	Wiregrass	99	99
Lake	1,310	1,310			

* see Allotment Specific Actions below

** area(s) within allotment did not meet RLH Standards but allotment as a whole did

Allotment notes - Johnson Lakes includes Flood Canyon AUMs; Long Canyon – combination of Locke Ridge & Meadow Canyon allotments

CHAPTER 2 ALTERNATIVES

Livestock Authorization in allotments which did not meet Rangeland Health Standards Due to Livestock Grazing

The following allotments were evaluated as not meeting Rangeland Health Standards. Management changes in active use are proposed as detailed below. For a complete description of changes in individual allotments, see Appendix 1.

Table 2-5 Proposed Livestock Grazing in Allotments Not Meeting RLH Standards Due to Livestock Grazing (Alt. C)

Allotment	Proposed Active Use		Current Active Use
	Initial	Potential	
Collet	97	97	97
Death Hollow	1,057	1,057	1,057
Ford Well	328	328	328
Mollies Nipple	3,307	3,862	3,862
Rock Creek-Mudholes	2,173	2,173	2,173
School Section	102	102	102
Soda	2,798	2,798	2,798
Upper Paria	2,780	2,780	2,780
Vermilion	2,065	2,849	2,849

Grazing restrictions

- Livestock grazing in areas undergoing rest as a result of range restoration projects or post fire rehabilitation would be placed in temporary non-use or suspensions for at least two growing seasons until restoration objectives have been met.
- Temporary restrictions of varying lengths could also apply to areas where rangelands are not making progress towards achieving Standards and to recover from events such as drought.

In order for rangeland restoration projects to be successful, there must be sufficient time given for the vegetation to establish itself in self sustaining communities. This requires a period of time when major disturbances or use of emerging vegetation must be restricted as much as possible. All rangeland restoration projects would have restoration objectives developed prior to initiation to provide for a measure of success and attainment of restoration objectives. Where rangelands are not making progress towards meeting Standards with actions already implemented, additional measures such as temporary non-use would be considered.

Implementation Actions Proposed:

- Develop rangeland restoration projects and stipulations in consultation with grazing permit holder(s).
- Ensure the required rest period through either a voluntary non-use by the permittee or by decision.
- Implement a monitoring process in order to provide timely evaluation as to whether or not areas not meeting Standards are improving.

CHAPTER 2

ALTERNATIVES

Allotment Specific Management Actions

For some allotments, proposed management and implementation actions have been developed and are listed below. Appendix 1 describes the proposed management for all individual allotments in greater detail.

Big Bowns Bench (same as Alternative A & B)

Re-authorize livestock grazing at the current active use level.

Collet (same as Alternative B)

- Re-authorize livestock grazing at the current active use level.
- Temporarily exclude livestock grazing from the portion of the Right Hand Collet Canyon that does not meet Rangeland Health Standards until Standards are met.

Due to an allotment boundary fence problem, livestock from the Upper Cattle allotment have been using the lower end of Right Hand Collet within the Collet allotment. Relocating the allotment boundary fence to the correct location and eliminating use by livestock from the adjacent allotment is expected to result in recovery of this area.

Future Project Implementation:

- Construct an allotment boundary fence at the correct location.
- Install gap fencing to create three pastures to be used in rotation rather than every year.
- Use limited to two pastures until Right Hand Collet riparian area recovers.

Coyote

Temporary nonuse or suspensions of 588 active AUMs in the Sand Gulch and Five Mile Pastures, which are rangeland seedings that are no longer producing desired forage. Temporary nonuse or suspensions would occur until restoration can be accomplished.

Implementation Action:

Initiate restoration of Sand Gulch and Five Mile Pastures.

Death Hollow (same as Alternative B)

- Re-authorize livestock grazing at current active use level.
- Limit the season of use for livestock grazing to no later than March 31st.
- Restrict livestock access into upper Little Death Hollow and Wolverine Creek at the narrows near the head of the canyons.

While most livestock are usually off this allotment by March 31st, a small number are often left through May 15th. The BLM range staff considers use between March 31st and May 15th as a contributing factor in the allotment's not meeting Rangeland Health Standards, particularly as it occurs during the critical growing season for spring grasses. If this period of use is terminated the causal factor in not meeting Standards would be eliminated. No AUM adjustments are proposed.

CHAPTER 2

ALTERNATIVES

Restricting access into the canyons will prevent livestock from being “driven” into the narrows to avoid hikers.

Future Project Implementation:

- Construct drift fences to restrict livestock access into upper Little Death Hollow and Wolverine Creek narrows.
- Construct riparian protection fences.

Ford Well (same as Alternative B)

No change from currently authorized active use. Maintain the Ford Well Spring protection fence, repair/replace collection and storage system.

Future Project Implementation:

Construct a fence, collection system and install a trough at Old Corral Spring.

Soda (same as Alternative B)

No change from currently authorized active use because the removal of approximately 50 wild cows in 2000 has allowed the recovery of springs and upland vegetation. The allotment has an upward trend (Appendix 1). The BLM and NRA will use methods from the “riparian toolbox” to achieve standards in riparian areas. To help meet upland standards the Soda allotment may be combined with the adjacent Fortymile Ridge allotment. This may result in an eleven pasture deferred rest rotation grazing system. With an implementation of this grazing system uplands should continue to move towards meeting standards.

Future Project Implementation:

Glen Canyon NRA and BLM would fence springs while maintaining livestock water access.

King Bench (same as Alternatives D & E)

- Develop a three-pasture system by dividing the King Bench Pasture into two pastures, King Bench and Deer Creek. Use water developments to draw livestock away from the Gulch.
- Implementation of the new pasture will be contingent upon installation of sufficient reliable water and other necessary improvements by BLM.

The Gulch is a very popular and heavily used hiking area and one of the areas most noted for livestock/recreation conflict. It currently provides the only reliable water for most of the pasture so livestock tend to stay there. King Bench Seep no longer provides reliable water, so it will be necessary to develop water catchments or other water developments on King Bench that would hold livestock on King Bench and out of the Gulch. The new pasture would provide the opportunity to develop a rotation system where use of the Gulch area is reduced.

Future Project Implementation:

- Split the King Bench Pasture into two pastures.

CHAPTER 2

ALTERNATIVES

- Develop water catchments to provide sufficient water, potentially using bare rock areas as collectors.
- Develop interpretative signage for human/livestock interaction.

Lake

No change from currently authorized active use.

Future Project Implementation:

- Riparian area protection on a site-by-site basis.

Last Chance (same as Alternative A)

No change from currently authorized active use.

Mollies Nipple

- Take temporary non-use or suspensions to 3307 AUMs from 3,862 AUMs to reflect reduced forage production on seeded pastures.
- Upon successful restoration of the seeded pastures, establish a new authorized use level based on the restored forage (potentially 3862 active use AUMs for the allotment).
- Rest two of the five transition pastures in the spring (approximately April 1st to May 31st) in order to meet the spring growing requirements of emerging vegetation. Rest two transition pastures in the fall (October 1 – November 30) alternating years with the other three transition pastures.
- Summer (approximately June 1 to September 30) and winter (approximately December 1 to March 31) use would continue as presently authorized.
- Initiate seven-pasture deferred rest rotation grazing system.
- Control the season of use in the newly created Gulch Pasture east of the House Rock Valley Road to resolve or reduce recreational impacts.
- Create a “new” Buckskin Gulch Pasture in the southeast corner of the Buckskin Pasture above the Buckskin Narrows.
- When conditions allow, grazing could be authorized in the new pasture from December 1st to February 28th every other year.

Following the developed seven-pasture deferred rotation plan is necessary to provide for periodic pasture rest and improved plant vigor. In the past, failure to fully implement the rotation plan, and the extended periods of drought, has resulted in a decline in the condition of the seeded pastures. The seeded pastures are being restored.

The Mollies Nipple allotment experiences conflicts between livestock use and hikers in the Buckskin Narrows. Because livestock congregate at the small seep above the Narrows, there is a tendency for them to be “pushed” down the Narrows as they try to avoid hikers. Additionally, the small seep in the area does not provide sufficient water for livestock purposes and is being impacted by livestock use. The area concerned is dominated by a large gravelly wash bottom and does not produce sufficient forage for annual grazing use. This alternative would manage the season of use and place protective

CHAPTER 2

ALTERNATIVES

structures for livestock control and spring protection in Buckskin Narrows to resolve the recreational conflict and allow restoration of the riparian area.

Implementation Actions:

- Rock House, Jenny Clay, Blue Spring, and Telegraph Pastures would be placed in voluntary non-use or temporarily suspended through decision as they are treated.
- Resume livestock grazing after at least two growing seasons and monitoring determines forage availability and appropriate active use upon restoration of seedings.
- Develop an interim pasture rotation schedule while the treated pastures are in the restoration phase.

Future Project Implementation:

- Split Nipple Pasture into East Nipple and West Nipple Pastures. Initiate deferred summer rotation using the two pastures generally from 6/1 to 7/31 and 8/1 to 9/30
- Deferred use of the five transition pastures by alternating use to ensure spring and fall rest period every other year. Generally 4/1 - 5/15, and 10/1 - 11/30
- Continue winter use of Buckskin Pasture from approximately 12/1 to 3/31.
- Construct 3.7 miles of fence along the House Rock Valley Road, and livestock drift and spring protection fences in the Gulch pasture.
- Develop alternate water sources in the Buckskin Pasture in the vicinity of the House Rock Valley Road, the south western half of Buckskin, and Deer Trails area of the Nipple Pasture.
- Summer (approximately June 1 to September 30) and winter (approximately December 1 to March 31) use would continue as presently authorized.

Rock Creek-Mudholes (same as Alternative B)

No change from currently authorized active use. Since 2000 the removal of the wild cattle has been a primary management objective. Due to work from the BLM and existing permittee objectives have been reached and the permittee is still actively working to keep wild cattle off the allotment. Since the removal of the wild cattle and no authorized grazing since 2000 through 2007 this allotment appears to have an upward trend. Methods from the “riparian toolbox” will continue to be used to bring riparian areas up to meeting standards.

Future Project Implementation:

Relocate West End Spring fence in order to access West End Spring from West End pasture.

School Section (same as Alternative B)

- No change from currently authorized active use.
- Divide the allotment into two pastures by fencing the old seeding from the untreated area of the allotment. Implement a two pasture deferred grazing system on the allotment, which would defer the early spring grazing on one pasture each grazing season.
- Restore the old seeding. The area that would be reseeded would rest from livestock grazing for at least 2 years

CHAPTER 2

ALTERNATIVES

Upper Paria

- No change from currently authorized use. Although the allotment fails to meet Standards, the mutual cooperation and coordination with the Upper Paria Grazing Association has been effective at determining annual stocking rates based upon available forage, precipitation, and overall range condition without stocking reductions. For the past five years, the average actual use for the Upper Paria allotment has not exceeded 50% (See Upper Paria Actual Use table in Appendix 1). Due in part to these voluntary reductions, on the ground gains, as indicated by trend, have been made in several pastures, *i.e.*, Mudholes, Lower Coal Bench, Bulldog, and Upper Jim. It is likely that progress will continue to be made toward meeting standards under this management strategy.
- Fall use pasture created on Bulldog Bench. Implementation of this action will reduce grazing by 68 AUMs during the critical spring growing season; use will occur during forage dormancy.
- Seeded pastures requiring restoration will remain open with reduced use until restoration work commences, and then will be placed in voluntary non-use or temporarily suspended through decision for at least two years until restoration objectives are met. Since these projects are funding-dependant, the BLM will continue to actively seek opportunities and partners in restoration in exchange for continued cooperation with permittees in meeting management objectives.

Future Project Implementation:

Manage South Pasture within Upper Paria allotment for emergency use.
Seeded

Vermilion

Temporarily suspend 784 AUMs, to reflect reduced forage production on seeded pastures. The authorized use on the allotment would be 2,065 AUMs. The grazing privilege on the allotment would remain at 2,849 AUMs.

- Upon successful restoration of the seeded pastures establish a new authorized use level based on the restored forage (potentially 2,849 AUMs for the allotment).
- Rest one of the winter pastures each year after February 28th in order to give growing season rest. The winter season of use would occur approximately December 1st through February 28th. The winter pasture that would normally be grazed during the winter season would be Fossil Wash, Government Reservoir and Old Paria Road pastures.
- Rest at least two transition pastures (Clark Ranch, Petrified Hollow, Seamen Wash, RCA 1, RCA 2 and RCA 3) during each grazing period for the transition season of use. The grazing periods for the transition season of use would include a spring period that would occur approximately April 15th through May 20th, and the fall period, which would occur approximately between October 1st through November 30th.
- Rest the public lands on the allotment between March 1st through April 14th and again May 21st through May 31st, in order to meet the spring growing requirement of emerging vegetation.
- Initiate a 10 pasture modified deferred rest rotation.
- RCA 1 and the Clark Ranch pasture would be grazed and rested together during the spring or fall periods of the transition season of use.

CHAPTER 2

ALTERNATIVES

- Create a three-pasture deferred rotation scheme for the Nephi Pasture once new water development are completed.

Implementation Action:

Restore RCA 1 and Fossil Wash pastures. These pastures would be placed in temporary non-use or suspensions as they are treated. The pasture rotation would be modified while these pastures are treated.

Future Project Implementation:

Install range improvements (water development or fences) necessary to initiate a rotation on Nephi pasture.

Willow Gulch (same as Alternative A)

Re-authorize livestock grazing at current active use level.

Implementation Actions

Monitor use levels and riparian conditions adjacent to Upper Calf Creek Falls and in Calf Creek above the Lower Falls and adjust or restrict use based on riparian conditions.

Priorities for Monitoring

Monitoring would be prioritized towards allotments which fail to meet Rangeland Health Standards. Allotments which meet Standards would receive appropriate levels of monitoring necessary to verify that they have not departed from prior assessments. Specific monitoring requirements would be established for allotments with either riparian or upland failures.

Rangeland Improvements

New rangeland improvements including pasture division fences, pipeline extensions and new water sources would be used to provide more intense livestock management through greater control over movement and dispersion. Existing rangeland improvements would be maintained where they continue to serve their intended purpose(s), or removed if necessary.

Implementation Actions Proposed:

- Repair fencing projects where field evaluations have identified maintenance needs.
- Evaluate all other projects for maintenance needs and functionality.
- Decommission projects no longer required or functioning.

Future Project Implementation:

- Construct pasture division fences where greater control of livestock movement is required.
- Extend existing pipelines and better utilize existing wells to provide better livestock dispersion including Coyote (well and pipeline), Deer Springs Point (windmill), First Point (private well), Meadow Canyon (private well), Twentymile (Lower Cattle), Upper Cattle/Ten Mile, Devil's Rock Garden (well and pipeline).

CHAPTER 2

ALTERNATIVES

- Consider new wells to replace spring use at Nephi and Fin Little Springs (Vermilion allotment), Big Hollow Spring (Fortymile Ridge allotment).

WILDLIFE MANAGEMENT ACTIONS

Southwest Willow Flycatcher (SWFL) – season of use standards

Limiting livestock grazing to winter would eliminate any livestock related interaction with SWFL during their breeding and nesting season.

Implementation Action:

Livestock grazing in suitable SWFL habitat would only be authorized between September 1st and March 15th.

Southwest Willow Flycatcher – plant utilization standards

Plant utilization in suitable SWFL habitat would be limited to 35% for herbaceous and 40% for browse species.

Mexican Spotted Owl – season of use in Protected Activity Centers (PACS)

Limiting livestock use in PACS during the breeding and nesting seasons would reduce displacement of prey species and their protective plant cover.

Implementation Action:

Livestock grazing would not be authorized in identified PACS during the breeding and nesting seasons.

CHAPTER 2 ALTERNATIVES

ALTERNATIVE D

ALTERNATIVE SUMMARY

Grazing management would be modified with priority on restoring rangeland health while providing research opportunities in restoration and monitoring success. Livestock grazing would be temporarily suspended in six allotments that did not meet Rangeland Health Standards. A future decision to re-initiate active use in these allotments will be considered when rangeland monitoring shows an indication of positive change and Rangeland Health Standards are being met. For planning purposes and the estimation of future uses, an assumption has been made that restoration actions would restore forage availability to previous levels. However, allotment specific evaluations would determine the actual active use levels upon successful restoration.

All items listed under **Management Actions Common to All Alternatives** are incorporated by reference.

LIVESTOCK GRAZING MANAGEMENT ACTIONS

Authorized livestock grazing

Initially authorize 62,681 AUMs of active use livestock grazing. Following successful rangeland restorations and evaluations that show allotments to be meeting Standards and forage to be available, active use may be increased to 75,757 AUMs. Total permitted use would be 105,438 AUMs, because of a cancelation of 750 AUMs (from Big Bowns Bench allotment) and including an allocation of 50 AUMs (for Varney Griffin allotment), with 29,681 AUMs of suspended use.

This alternative would reduce authorized livestock grazing by suspending livestock grazing in six of nine allotments that did not meet Rangeland Health Standards. A failure to achieve the Standards for upland range health is indicative of grazing management practices that are detrimental to rangeland health or that do not provide for recovery from past management practices. Uplands constitute nearly ninety nine percent of the surface area assessed (riparian areas constitute 1.03%) so negative monitoring data indicates widespread impacts. Failure to meet upland Standards usually corresponded with failure to meet other goals.

Implementation Actions Proposed:

Livestock grazing in six allotments would be temporarily suspended.

Livestock grazing in allotments which met Rangeland Health Standards

Rangeland Health in the 73 allotments listed below was evaluated as meeting Rangeland Health Standards. Management changes in response to monitoring would involve routine grazing management techniques such as season of use modifications, pasture rotations, reduced use periods when utilization guidelines are reached, and temporary closures during restoration.

CHAPTER 2 ALTERNATIVES

Table 2-6 Proposed Livestock Grazing in Allotments Meeting RLH Standards (Alt. D)

Allotment	Active Use		Allotment	Active Use	
	Initial	Potential		Initial	Potential
Alvey Wash **	1,424	1,424	Long Canyon *	289	289
Big Bowns Bench *	0	0	Locke Ridge (State)	27	27
Big Horn **	3,515	3,515	Lower Hackberry	435	435
Black Ridge	903	903	Last Chance	4,289	4,289
Black Rock	408	408	Lower Cattle	7,488	7,488
Black Rock (State)	64	64	Lower Warm Creek	225	225
Boot	45	45	Main Canyon (State)	14	14
Boulder Creek	80	80	Moody	909	909
Bull Run (State)	5	5	Moyle C. Johnson	53	53
Bunting Trust	16	16	Mud Springs **	277	277
Calf Pasture	176	176	Neaf	9	9
Circle Cliffs**	1,050	1,050	Nipple Bench	993	993
Clark Bench *, **	1,238	1,238	Pine Creek	144	144
Cockscomb	36	36	Pine Creek (State) **	27	27
Cottonwood	3,153	3,153	Pine Point	365	365
Coyote**	1,456	2,044	Round Valley	522	522
Deer Creek	358	358	Roy Willis	9	9
Deer Range **	231	231	Rush Beds **	252	252
Deer Springs Point **	503	503	Second Point **	69	69
Deer Springs (State)	82	82	Second Point (State)	29	29
Dry Valley	677	677	Sink Holes	154	154
Dry Valley (State)	22	22	Slick Rock State	24	24
Five Mile Mountain**	385	385	South Fork	12	12
First Point	410	410	Swallow Park**	1,068	1,068
Flood canyon	--	--	Timber Mountain	426	426
Forty Mile Ridge	4,290	4,290	Upper Cattle **	8,158	8,158
Hall Ranch	12	12	Upper Hackberry	654	654
Granary Ranch	70	70	Upper Warm Creek**	1,638	1,638
Haymaker Bench	100	100	Varney Griffin	50	50
Johnson Canyon **	274	274	Wagon Box Mesa	637	637
Headwaters**	3,822	3,822	Wahweap	491	491
Hells Bellows	44	44	White Rock	60	60
Johnson Lakes **	495	495	White Sage **	76	76
Johnson Point	135	135	Wide Hollow *	353	353
King Bench *	1,515	1,515	Willow Gulch *	474	474
Lake Powell	20	20	Wiregrass	99	99
Lake	1,310	1,310			

(* see Allotment Specific Actions below) (** area(s) within allotment did not meet RLH Standards but allotment as a whole did, management actions to be taken, see Appendix1.)

Allotment notes - Johnson Lakes includes Flood Canyon AUMs; Long Canyon – combination of Locke Ridge & Meadow Canyon allotments

CHAPTER 2 ALTERNATIVES

Livestock Authorization in allotments which did not meet Rangeland Health Standards Due to Livestock Grazing

The following allotments were evaluated as not meeting Rangeland Health Standards. Management changes in active use are proposed as detailed below. For a complete description of changes in individual allotments, see Appendix 1.

Table 2-7 Proposed Livestock Grazing in Allotments Not Meeting RLH Standards Due to Livestock Grazing (Alt. D)

Allotment	Proposed Active Use		Current Active Use
	Initial	Potential	
Collet	0	97	97
Death Hollow	1,057	1,057	1,057
Ford Well	328	328	328
Mollies Nipple	0	3,307	3,862
Rock Creek-Mudholes	2,173	2,173	2,173
School Section*	0	102	102
Soda	0	2,798	2,798
Upper Paria	0	2,780	2,780
Vermilion	0	2,849	2,849

Grazing restrictions

- Temporary suspensions of varying lengths could apply to areas where rangelands are not making progress towards achieving Standards and to recover from events such as drought.
- Livestock grazing in six allotments which are not meeting Upland Standards of Rangeland Health (Soils and/or Vegetation) would be temporarily suspended until the Standards for Rangeland Health have been achieved. This suspension would affect six allotments.
- Upon achieving the Standards, as determined by monitoring, the forage available would be reassessed and the appropriate active use level for the allotment(s) determined.

Allotment Specific Management Decision

Big Bowns Bench (same as Alternative E)

Close the remaining portions of the allotment to livestock grazing.

Portions of this allotment were closed to grazing use in 1999 to lower conflicts recreational users. The three pastures on Big Bowns Bench which remain open to livestock use have a season of use from November 1st to March 31st. No livestock grazing has occurred here since 1999. Both the current and previous permit holders have taken voluntary non-use.

Collet (same as Alternative E)

Suspend livestock grazing until Rangeland Health Standards are achieved.

CHAPTER 2

ALTERNATIVES

Coyote (same as Alternative C)

Temporary nonuse or suspensions of 588 active AUMs in the Sand Gulch and Five Mile Pastures, which are rangeland seedings that are no longer producing desired forage. Temporary nonuse or suspensions would occur until restoration can be accomplished.

Implementation Actions:

Initiate restoration of the Sand Gulch and Five Mile Pastures.

Death Hollow (same as Alternative B)

- Re-authorize livestock grazing at current active use level.
- Limit the season of use for livestock grazing to no later than March 31st.
- Restrict livestock access into upper Little Death Hollow and Wolverine Creek at the narrows near the head of the canyons.

While most livestock are usually off this allotment by March 31st, a small number are often left through May 15th. The BLM range staff considers use between March 31st and May 15th as a contributing factor in the allotment's not meeting Rangeland Health Standards, particularly as it occurs during the critical growing season for spring grasses. If this period of use is terminated the causal factor in not meeting Standards would be eliminated. No AUM adjustments are proposed.

Restricting access into the canyons will prevent livestock from being "driven" into the narrows to avoid hikers.

Future Project Implementation:

- Construct drift fences to restrict livestock access into upper Little Death Hollow and Wolverine Creek narrows.
- Construct riparian protection fences.

Ford Well (same as Alternative B)

No change from currently authorized active use. Maintain the Ford Well Spring protection fence, repair/replace collection and storage system.

Future Project Implementation:

Construct a fence, collection system and install a trough at Old Corral Spring.

Soda Allotment (same as Alternative E)

Suspend livestock grazing until Rangeland Health Standards are met.

Future Project Implementation:

Glen Canyon NRA and BLM would fence springs while maintaining livestock water access.

CHAPTER 2

ALTERNATIVES

King Bench (same as Alternatives C & E)

- Develop a three-pasture system by dividing the King Bench Pasture into two pastures, King Bench and Deer Creek. Use water developments to draw livestock away from the Gulch.
- Implementation of the new pasture will be contingent upon installation of sufficient reliable water and other necessary improvements by BLM.

The Gulch is a very popular and heavily used hiking area and one of the areas most noted for livestock/recreation conflict. It currently provides the only reliable water for most of the pasture so livestock tend to stay there. King Bench Seep no longer provides reliable water, so it will be necessary to develop water catchments or other water developments on King Bench that would hold livestock on King Bench and out of the Gulch. The new pasture would provide the opportunity to develop a rotation system where use of the Gulch area is reduced.

Future Project Implementation:

- Split the King Bench Pasture into two pastures.
- Develop water catchments to provide sufficient water, potentially using bare rock areas as collectors.
- Develop interpretative signage for human/livestock interaction.

Lake

No change from currently authorized active use.

Future Project Implementation:

- Riparian area protection on a site-by-site basis.

Last Chance (same as Alternative A)

No change from currently authorized active use.

Mollies Nipple

- Implement suspensions of livestock grazing until Rangeland Health Standards are achieved.
- Prior to re-authorizing grazing in the allotment develop a new Allotment Management Plan incorporating a pasture rotation system and a spring rest period from April 1st to May 31st for two of the five scheduled transition pastures.
- Control the season of use in the newly created Gulch Pasture east of the House Rock Valley Road to resolve or reduce recreational impacts.

Implementation Action:

Restore seeded pastures.

Future Project Implementations:

- Construct 3.7 miles of fence along the House Rock Valley road at Buckskin Draw prior to livestock use of the area.
- If grazing is re-authorized, develop an alternate water source in the Buckskin Pasture in the vicinity of the House Rock Valley Road prior to livestock use of the area.

CHAPTER 2

ALTERNATIVES

Rock Creek-Mudholes

- Continue ongoing riparian restoration projects.
- No change from currently authorized active use
- Relocate West End Spring fence in order to access West End Spring from West End pasture.

School Section (same as Alternative E)

Suspend livestock grazing until Rangeland Health Standards are met and seeding restoration criteria has been achieved.

Upper Paria (same as Alternative E)

Suspend livestock grazing until Rangeland Health Standards are achieved.

Future Project Implementation:

Manage South Pasture within Upper Paria allotment for emergency use.

Vermilion (same as Alternative E)

- Implement temporary suspensions on livestock grazing until Rangeland Health Standards are achieved.
- Prior to re-authorizing grazing in the allotment develop a new Allotment Management Plan incorporating a pasture rotation system and a spring rest period from March 1st to May 31st in three of the seven scheduled transition pastures.
- Create a three-pasture deferred rotation scheme for Nephi Pasture.

Implementation Action:

Restore seeded pastures RCA1 and Fossil Wash.

Future Project Implementation:

Install range improvements necessary to manage Nephi Pasture as three separate pastures.

Willow Gulch (same as Alternative A)

Re-authorize livestock grazing at current active use level.

Implementation Actions

Monitor use levels and riparian conditions adjacent to Upper Calf Creek Falls and in Calf Creek above the Lower Falls and adjust or restrict use based on riparian conditions.

Priorities for Monitoring

Monitoring would be prioritized towards allotments which fail to meet Rangeland Health Standards. Allotments which meet Standards would receive minimal monitoring, necessary to verify that they have not departed from prior assessments. Specific monitoring requirements would be established for allotments with riparian failures. Allotments with upland failures, being closed under this alternative, would receive monitoring specific to making Standards determinations for the soils and species mix Standards.

CHAPTER 2

ALTERNATIVES

Rangeland Improvements

This alternative would place a high priority on resolving grazing issues through the use of structural range improvements. New rangeland improvements including pasture division fences, pipeline extensions and new water sources would be considered on a case-by-case basis where necessary for the protection of natural and cultural resources. Existing rangeland improvements would be maintained where they continue to serve their intended purpose(s), or otherwise removed.

The temporary suspensions in authorized grazing use should reduce the need for many of the rangeland improvements proposed in Alternative C. Rangeland improvements would be focused more on protecting natural and cultural resources than providing for more intensively managed grazing.

A factor in not meeting Rangeland Health Standards and Proper Functioning Condition for many riparian (spring) areas is the lack of adequate maintenance of protective fencing around water sources. Many fences were found to be down due to age, flood damage, or livestock pressure. Repairs to these protective fences is expected to provide the action(s) necessary to reverse site deterioration and lead to these areas making progress towards, and eventually meeting, Rangeland Health Standards and Proper Functioning condition.

Implementation Actions:

- Repair fencing projects where field evaluations have identified maintenance needs.
- Evaluate all other projects for maintenance needs and functionality.
- Decommission projects no longer required or functioning.
- Construct pasture division fences where greater control of livestock movement is required.
- Extend existing pipelines and better utilize existing wells on both public and private lands where this could replace the use of natural springs and leave more water for riparian purposes, obligate vegetation and wildlife.

Future Project Implementation:

Propose new wells to replace spring use at Nephi and Fin Little Springs (Vermilion allotment), Big Hollow Spring (Fortymile allotment)

WILDLIFE MANAGEMENT ACTIONS

Southwest Willow Flycatcher (SWFL) – season of use standards (same as C)

Limiting livestock grazing to winter would eliminate any livestock related interaction with SWFL during their breeding and nesting season.

Implementation Action:

Livestock grazing in suitable SWFL habitat would only be authorized between September 1st and March 15th. Although the recovery plan only specifies grazing use be curtailed during growing and mating season, between March 15th and September 1st, the season of use as proposed provides for SWFL protection.

CHAPTER 2

ALTERNATIVES

Southwest Willow Flycatcher – plant utilization standards (Same as alternative C)

Plant utilization in suitable SWFL habitat would be limited to 35% for herbaceous and 40% for browse species.

Mexican Spotted Owl – season of use in Protected Activity Centers (PACS) (Same as C)

Limiting livestock use in PACS during the breeding and nesting seasons would reduce displacement of prey species and their protective plant cover.

Implementation Action:

Livestock grazing would not be authorized in identified PACS during the breeding and nesting seasons.

CHAPTER 2

ALTERNATIVES

ALTERNATIVE E

ALTERNATIVE SUMMARY

Livestock grazing would be temporarily suspended in Collet, Ford Well, Soda, Mollies Nipple, School Section, Upper Paria, Vermilion, Death Hollow, Rock Creek-Mudholes allotments where Rangeland Health Standards are not being met, and where a determination has been made that the failure to meet Standards was due to existing livestock grazing management practices or levels of use. These temporary suspensions would remain in effect until Standards are met, at which time, allotment specific levels of active use and management criteria would be established and the suspension ended. A portion of the Coyote allotment would also be temporarily suspended for restoration purposes. Rehabilitation efforts, such as re-seeding, watershed and riparian projects would be emphasized in those areas. For planning purposes and the estimation of future uses, an assumption has been made that restoration actions would restore forage availability to previous levels. However, allotment specific evaluations would determine the actual active use levels upon successful restoration.

Innovative rangeland management science and techniques would receive priority under this alternative. Scientific study of improved rangeland management methods and practices would be encouraged.

All items listed under **Management Actions Common to All Alternatives** are incorporated by reference.

LIVESTOCK GRAZING MANAGEMENT ACTIONS

Authorized livestock grazing

Authorize an initial level of 58,829 AUMs of active use livestock grazing. Place AUMs in nine allotments not meeting Rangeland Health Standards in suspension until the allotment(s) is/are re-evaluated as meeting Rangeland Health Standards. Authorize up to 73,800 AUMs active use when all allotments are evaluated as meeting Rangeland Health Standards. Total permitted use would be 103,481 AUMs because of the cancelation of 2,657 AUMs (from Big Bowns Bench, and portions of Mollies Nipple and Vermilion allotments), including an allocation of 50 AUMs (for Varney Griffin allotment), and requested closures by Glen Canyon NRA), with 29,681 AUMs of suspended use.

Livestock grazing in allotments which met Rangeland Health Standards

Rangeland Health in the 73 allotments listed below was evaluated as meeting Rangeland Health Standards. Active livestock grazing use would be re-authorized at current active use levels in 72 of those allotments (not including Lake allotment). Management changes in response to monitoring would involve routine grazing management techniques such as season of use modifications, pasture rotations, reduced use periods when utilization guidelines are reached, and temporary closures during restoration projects.

CHAPTER 2 ALTERNATIVES

Table 2-8 Proposed Livestock Grazing in Allotments Meeting RLH Standards (Alternative E)

Allotment	Active Use		Allotment	Active Use	
	Initial	Potential		Initial	Potential
Alvey Wash **	1,424	1,424	Long Canyon *	289	289
Big Bowns Bench *	0	0	Locke Ridge (State)	27	27
Big Horn **	3,515	3,515	Lower Hackberry	435	435
Black Ridge	903	903	Last Chance	4,289	4,289
Black Rock	408	408	Lower Cattle	7,488	7,488
Black Rock (State)	64	64	Lower Warm Creek	225	225
Boot	45	45	Main Canyon (State)	14	14
Boulder Creek	80	80	Moody	909	909
Bull Run (State)	5	5	Moyle C. Johnson	53	53
Bunting Trust	16	16	Mud Springs **	277	277
Calf Pasture	176	176	Neaf	9	9
Circle Cliffs**	1,050	1,050	Nipple Bench	993	993
Clark Bench *, **	1,238	1,238	Pine Creek	144	144
Cockscomb	36	36	Pine Creek (State) **	27	27
Cottonwood	3,153	3,153	Pine Point	365	365
Coyote**	1,456	2,044	Round Valley	522	522
Deer Creek	358	358	Roy Willis	9	9
Deer Range **	231	231	Rush Beds **	252	252
Deer Springs Point **	503	503	Second Point **	69	69
Deer Springs (State)	82	82	Second Point (State)	29	29
Dry Valley	677	677	Sink Holes	154	154
Dry Valley (State)	22	22	Slick Rock State	24	24
Five Mile Mountain**	385	385	South Fork	12	12
First Point	410	410	Swallow Park**	1,068	1,068
Flood Canyon	--	--	Timber Mountain	426	426
Forty Mile Ridge	4,290	4,290	Upper Cattle **	8,158	8,158
Hall Ranch	12	12	Upper Hackberry	654	654
Granary Ranch	70	70	Upper Warm Creek**	1,638	1,638
Haymaker Bench	100	100	Varney Griffin	50	50
Johnson Canyon **	274	274	Wagon Box Mesa	637	637
Headwaters**	3,822	3,822	Wahweap	491	491
Hells Bellows	44	44	White Rock	60	60
Johnson Lakes **	495	495	White Sage **	76	76
Johnson Point	135	135	Wide Hollow *	353	353
King Bench *	1,515	1,515	Willow Gulch *	474	474
Lake Powell	20	20	Wiregrass	99	99
Lake	1,310	1,310			

* see Allotment Specific Actions below

** area(s) within allotment did not meet RLH Standards but allotment as a whole did

Allotment notes - Johnson Lakes includes Flood Canyon AUMs; Long Canyon – combination of Locke Ridge & Meadow Canyon allotments

CHAPTER 2 ALTERNATIVES

Livestock Authorization in allotments which did not meet Rangeland Health Standards Due to Livestock Grazing

The following allotments were evaluated as not meeting Rangeland Health Standards. Management changes in active use are proposed as detailed below. For a complete description of changes in individual allotments, see Appendix 1.

Table 2-9 Proposed Livestock Grazing in Allotments Not Meeting RLH Standards Due to Livestock Grazing (Alt. E)

Allotment	Proposed Active Use		Current Active Use
	Initial	Potential	
Collet	0	97	97
Death Hollow	0	1,057	1,057
Ford Well	0	328	328
Mollies Nipple	0	3,307	3,862
Rock Creek-Mudholes	0	2,101	2,173
School Section	0	102	102
Soda	0	2,798	2,798
Upper Paria	0	2,780	2,780
Vermilion	0	1,813	2,849

Grazing restrictions

Livestock grazing in nine allotments evaluated as not meeting Rangeland Health Standards and where a determination was made that the failure to meet Standards was due to existing livestock grazing management practices or levels of use would be temporarily suspended until an allotment re-evaluation finds that Rangeland Health Standards are being met.

In order for rangeland restoration to be successful, there must be sufficient time given for the vegetation to establish itself in self sustaining communities. This requires a period of time when major disturbances or use of emerging vegetation must be restricted as much as possible. The complete cessation of livestock use in allotments not meeting RLH Standards would provide the opportunity for an accelerated process of rangeland recovery. Rangeland restoration projects would have site-specific restoration objectives developed prior to initiation to provide for a measure of success and attainment of restoration objectives.

Allotment Specific Management Actions

Big Bowns Bench (same as Alternative D)

Close the remaining portions of the allotment to livestock grazing.

Portions of this allotment were closed to grazing use in 1999 to lower conflicts recreational users. The three pastures on Big Bowns Bench which remain open to livestock use have a season of use from November 1st to March 31st. No livestock grazing has occurred here since 1999. Both the current and previous permit holders have taken voluntary non-use.

CHAPTER 2

ALTERNATIVES

Collet (same as Alternative D)

Temporarily suspend livestock grazing use until Rangeland Health Standards are achieved.

Coyote (same as Alternative C)

Temporary nonuse or suspensions of 588 active AUMs in the Sand Gulch and Five Mile Pastures, which are rangeland seedings that are no longer producing desired forage. Temporary nonuse or suspensions would occur until restoration can be accomplished.

Implementation Action:

Initiate restoration of the Sand Gulch and Five Mile Pastures.

Death Hollow

- Temporarily suspend livestock grazing use until Rangeland Health Standards are achieved.
- Restrict livestock access into upper Little Death Hollow and Wolverine Creek at the narrows near the head of the canyons using the existing recreational protection fence.

While most livestock are usually off this allotment by March 31st, a small number is often left through May 15th. The BLM range staff considers use between March 31st and May 15th as a contributing factor in the allotment's not meeting Rangeland Health Standards, particularly as it occurs during the critical growing season for spring grasses. If this period of use is terminated the primary causal factor in not meeting Standards would be eliminated.

Restricting access into the canyons will prevent livestock from being "driven" into the narrows to avoid hikers.

Future Project Implementation:

Construct fences to restrict livestock access into upper Little Death Hollow and Wolverine Creek narrows.

Ford Well

- Temporarily suspend livestock grazing use until Rangeland Health Standards are achieved.

Soda (same as Alternative D)

- Temporarily suspend livestock grazing until Rangeland Health standards met.
- Fence the heads of Willow, Fortymile, Llewellyn, and Davis Gulches to exclude livestock

Future Project Implementation:

BLM and Glen Canyon NRA would fence springs while maintaining livestock water access

King Bench (same as Alternatives C & D)

- Develop a three-pasture system by dividing the King Bench Pasture into two pastures, King Bench and Deer Creek. Use water developments to draw livestock away from the Gulch.

CHAPTER 2

ALTERNATIVES

- Implementation of the new pasture will be contingent upon installation of sufficient reliable water and other necessary improvements by BLM.

The Gulch is a very popular and heavily used hiking area and one of the areas most noted for livestock/recreation conflict. It currently provides the only reliable water for most of the pasture so livestock tend to stay there. King Bench Seep no longer provides reliable water, so it will be necessary to develop water catchments or other water developments on King Bench that would hold livestock on King Bench and out of the Gulch. The new pasture would provide the opportunity to develop a rotation system where use of the Gulch area is reduced.

Future Project Implementation:

- Split the King Bench Pasture into two pastures.
- Develop water catchments to provide sufficient water, potentially using bare rock areas as collectors.
- Develop interpretative signage for human/livestock interaction.

Lake

Close the GCNRA portion of the Navajo Point Pasture, reducing 294 AUMs on the Lake Allotment.

Future Project Implementation:

- Riparian area protection on a site-by-site basis.

Last Chance

- Continue to authorize 4,289 AUMs for livestock grazing.
- Close a portion of the winter pasture east of Rogers Canyon.

Future Project Implementation:

- Construct a fence across East Rogers Canyon.

Mollies Nipple

- Temporarily suspend livestock grazing use until Rangeland Health Standards are achieved.
- Reduce active use by 555 AUMs.
- Incorporate a pasture rotation system and a spring rest period from April 1st to May 31st for all public range on the allotment.
- Close the area in the Buckskin Pasture east of the House Rock Valley Road from future livestock use.

Implementation Action:

Restore seeded pastures.

Future Project Implementation:

- Construct 3.7 miles of fence along the House Rock Valley Road prior to livestock use of the area.

CHAPTER 2

ALTERNATIVES

- Develop an alternate water source in the Buckskin Pasture in the vicinity of the House Rock Valley Road prior to livestock use of the area.

Rock Creek-Mudholes

- Temporarily suspend all livestock grazing until Rangeland Health Standards are achieved.
- Close the tip of Grand Bench to livestock grazing to protect relic plant communities. Allotment active use reduction of 72 AUMs.
- Continue ongoing riparian restoration projects.

Future Project Implementation:

Glen Canyon NRA would install drift fencing to implement the closure of the tip of Grand Bench per existing MOU.

School Section (same as Alternative D)

Temporarily suspend livestock grazing until Rangeland Health Standards are met and seeding restoration criteria has been achieved.

Upper Paria (same as Alternative D)

Temporarily suspend livestock grazing until Rangeland Health Standards are achieved.

Future Project Implementation:

Manage South Pasture within Upper Paria allotment for emergency use.

Vermilion

- Temporarily suspend livestock grazing use until Rangeland Health Standards are achieved.
- Reduce active use by 1,036 AUMs.
- Prior to re-authorizing grazing in the allotment develop a new pasture rotation system and a spring rest period from March 1st to May 31st for all Federal range within the allotment.
- Create a three-pasture deferred rotation scheme for Nephi Pasture.

Implementation Action:

Restore seeded pastures RCA1 and Fossil Wash.

Future Project Implementation:

Install range improvements necessary to manage Nephi Pasture as three separate pastures.

Willow Gulch

Re-authorize livestock grazing at current active use level.

Implementation Actions

- Monitor use levels and riparian conditions adjacent to Upper Calf Creek Falls and in Calf Creek above the Lower Falls and adjust or restrict use based on riparian conditions.
- Close the area to livestock grazing along Calf Creek between Upper and Lower Falls.

CHAPTER 2 ALTERNATIVES

Priorities for Monitoring

Monitoring would be prioritized towards allotments which fail to meet Rangeland Health Standards. Allotments which meet Standards would receive minimal monitoring, necessary to verify that they have not departed from prior assessments. Specific monitoring requirements would be established for allotments with either riparian or upland failures, with emphasis on determining when allotments have successfully met standards.

Rangeland Improvements

- A strong emphasis would be placed upon plant restoration.
- Restoration of existing rangeland seedings would be a high priority.

WILDLIFE MANAGEMENT ACTIONS

Southwest Willow Flycatcher (SWFL) – season of use standards

Limiting livestock grazing to winter would eliminate any livestock related interaction with SWFL during their breeding and nesting season.

Implementation Action:

Livestock grazing in suitable SWFL habitat would only be authorized between September 1st and March 15th.

Southwest Willow Flycatcher – plant utilization standards

Plant utilization in suitable SWFL habitat would be limited to 35% for herbaceous and 40% for browse species.

Mexican Spotted Owl – season of use in Protected Activity Centers (PACS)

Limiting livestock use in PACS during the breeding and nesting seasons would reduce displacement of prey species and their protective plant cover.

Implementation Action:

Livestock grazing would not be authorized in identified PACS during the breeding and nesting seasons.

CHAPTER 2 ALTERNATIVES

Table 2-10 presents a comparison summary of anticipated impacts from proposed actions for the five alternatives analyzed in the DEIS. Chapter 4 provides a more detailed impact analysis.

Table 2-10 Comparative Summary of Impacts by Alternative

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Livestock Grazing				
<ul style="list-style-type: none"> • No change in authorized AUMs on all allotments • No change in livestock management proposed • Livestock/recreation conflicts not resolved • Downward trend and/or failure to meet Rangeland Health Standards would continue on allotments where this is occurring 	<p>ALLOTMENT SPECIFIC CONSEQUENCES:</p> <p><u>Circle Cliffs</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Conflict between livestock and hikers would be reduced in Upper Gulch • Use from Upper Gulch(105 AUMs) would be distributed among other pastures which may require future adjustments in grazing use <p><u>Clark Bench</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Grazing season reduced by 30 days • Improved livestock distribution & trend 	<p>ALLOTMENT SPECIFIC CONSEQUENCES:</p> <p><u>Circle Cliffs</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Clark Bench</u></p> <ul style="list-style-type: none"> • Same as Alternative B 	<p>ALLOTMENT SPECIFIC CONSEQUENCES:</p> <p><u>Circle Cliffs</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Clark Bench</u></p> <ul style="list-style-type: none"> • Same as Alternative B 	<p>ALLOTMENT SPECIFIC CONSEQUENCES:</p> <p><u>Circle Cliffs</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Clark Bench</u></p> <ul style="list-style-type: none"> • Same as Alternative B

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Livestock Grazing (cont.)				
	<p><u>Collet</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Improved livestock distribution • Livestock excluded from Right Hand Collet Canyon • Slow progress toward meeting Standards <p><u>Coyote</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Temporary suspension of 588 AUM begins if restoration is initiated • Increase in forage following restoration <p><u>Death Hollow</u></p> <ul style="list-style-type: none"> • Conflict between livestock and hikers reduced • Grazing preference remains the same • Change in season of use • Progress towards meeting riparian Standards 	<p><u>Collet</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Coyote</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 588 AUMs for restoration in Sand Gulch and Fivemile Pastures • Long term increase in forage availability <ul style="list-style-type: none"> • Static or upward trend would be achieved • Progress toward meeting standards <p><u>Death Hollow</u></p> <ul style="list-style-type: none"> • Conflict between livestock and hikers reduced • Grazing preference remains the same • Change in season of use & livestock distribution <ul style="list-style-type: none"> • Greater progress towards meeting riparian Standards compared to B 	<p><u>Collet</u></p> <ul style="list-style-type: none"> • Temporary suspension of all 97 AUMs • Progress towards Standards would be more rapid than Alternatives B and C <p><u>Coyote</u></p> <ul style="list-style-type: none"> • Same as Alternative C <p><u>Death Hollow</u></p> <ul style="list-style-type: none"> • Same as Alternative C 	<p><u>Collet</u></p> <ul style="list-style-type: none"> • Same as Alternative D <p><u>Coyote</u></p> <ul style="list-style-type: none"> • Same as Alternative C <p><u>Death Hollow</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of all 1,057 AUMs until Standards are met • Improved rangeland health • Increased recovery of riparian areas compared to Alternatives A – D • Increased risk of grazing related impacts to riparian when grazing returns

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Livestock Grazing (cont.)				
	<p><u>Ford Well</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Progress towards meeting riparian Standards <p><u>Soda</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Slow progress towards meeting riparian Standards • Continued static to upward trend <p><u>King Bench</u></p> <ul style="list-style-type: none"> • Same as Alternative A 	<p><u>Ford Well</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Soda</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>King Bench</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same 	<p><u>Ford Well</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Soda</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of all 2,798 AUMs until Standards are met • Progress towards meeting riparian Standards more rapid than Alternatives A, B and C • Upward trend <p><u>King Bench</u></p> <ul style="list-style-type: none"> • Same as Alternative C 	<p><u>Ford Well</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of all 328 AUMs until Standards are met • Improved rangeland health • Progress towards meeting riparian Standards more rapid than Alternatives A, B, C and D <p><u>Soda</u></p> <ul style="list-style-type: none"> • Same as D <p><u>King Bench</u></p> <ul style="list-style-type: none"> • Same as Alternative C

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts on Livestock Grazing (cont.)				
	<p><u>Lake</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Change in livestock distribution and season of use • Riparian areas protected • Upward trend would continue <p><u>Last Chance</u></p> <ul style="list-style-type: none"> • Same as Alternative A 	<p><u>King Bench</u> (cont.)</p> <ul style="list-style-type: none"> • Conflict between livestock and hikers reduced in The Gulch • Increased livestock use and hiker conflict in proposed Deer Creek Pasture • Increased livestock concentration and potential of vehicle collisions on Burr Trail <p><u>Lake</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Last Chance</u></p> <ul style="list-style-type: none"> • Same as Alternative A 	<p><u>Lake</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Last Chance</u></p> <ul style="list-style-type: none"> • Same as Alternative A 	<p><u>Lake</u></p> <ul style="list-style-type: none"> • GCNRA portion of Navajo Point Pasture closed and active AUMs reduced by 294 • Increased health of riparian areas • Minimal improvement of upland areas • Upward trend would continue <p><u>Last Chance</u></p> <ul style="list-style-type: none"> • Grazing preference remain the same • Portion of Winter Pasture closed • Riparian area in East Rogers Canyon enhanced • Overall downward trend would continue

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Livestock Grazing (cont.)				
	<p><u>Mollies Nipple</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Management actions result in improved livestock management • Slow progress towards meeting Standards • Trend would slowly improve • Livestock/hiker conflict resolved <p><u>Rock Creek-Mudholes</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Slow progress towards meeting riparian Standards • Upward trend would continue 	<p><u>Mollies Nipple</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 555 AUMs for restoration • Total potential of 3,862 AUMs after restoration • Management actions result in improved livestock management <ul style="list-style-type: none"> • Rangeland health and forage conditions would be enhanced • Slow progress towards meeting Standards • Trend would improve more quickly than B • Livestock/hiker conflict resolved <p><u>Rock Creek-Mudholes</u></p> <ul style="list-style-type: none"> • Same as Alternative B 	<p><u>Mollies Nipple</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 3,862 AUMs until Standards are met • Total potential of 3,862 AUMs after restoration • Progress towards meeting riparian Standards more rapid than Alternatives A, B and C • Conflict between livestock and hikers would be resolved <p><u>Rock Creek-Mudholes</u></p> <ul style="list-style-type: none"> • Progress towards meeting riparian Standards more rapid than Alternatives A, B and C • Upward trend would continue 	<p><u>Mollies Nipple</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 3,862 AUMs until Standards are met • Total potential of 3,307 AUMs after restoration • season of use shortened by 61 days • Progress towards meeting riparian Standards more rapid than Alternatives A, B and C • Conflict between livestock and hikers would be eliminated • Upward trend expected <p><u>Rock Creek-Mudholes</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 2,101 AUMs until Standards are met • Southern tip of Grand Bench Pasture closed resulting in a permanent reduction of 72 AUMs • Progress towards meeting riparian Standards more rapid than Alternatives A, B and C • Trend would improve

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Livestock Grazing (cont.)				
	<p><u>School Section</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Slow progress towards meeting upland Standards following restoration • Trend would improve <p><u>Upper Paria</u></p> <ul style="list-style-type: none"> • Temporary change in grazing management for restoration • Progress towards meeting Standards following restoration • Trend would improve <p><u>Vermilion</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Slow progress towards meeting Standards • Trend would improve 	<p><u>School Section</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Upper Paria</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Vermilion</u></p> <ul style="list-style-type: none"> • Grazing preference remains the same • Temporary suspension of 784 AUMs until restoration is completed • Improved rangeland health • Improved livestock distribution 	<p><u>School Section</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 102 AUMs until Standards are met • Progress towards meeting upland Standards following restoration more quickly than Alternative A, B, and C • Trend would improve <p><u>Upper Paria</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 2,780 AUMs until Standards are met • Progress towards meeting upland Standards following restoration more quickly than Alternative A, B, and C • Trend would improve & move toward potential natural community <p><u>Vermilion</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 2,849 AUMs until Standards are met 	<p><u>School Section</u></p> <ul style="list-style-type: none"> • Same as Alternative D <p><u>Upper Paria</u></p> <ul style="list-style-type: none"> • Same as Alternative D <p><u>Vermilion</u></p> <ul style="list-style-type: none"> • Immediate temporary suspension of 2,849 AUMs until Standards are met • Permanent reduction of 1,036 AUMs

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Livestock Grazing (cont.)				
	<p><u>Willow Gulch</u></p> <ul style="list-style-type: none"> • Same as Alternative A 	<p><u>Vermilion</u> (cont.)</p> <ul style="list-style-type: none"> • Progress towards meeting Standards quicker than Alternative A and B • Trend would improve <p><u>Willow Gulch</u></p> <ul style="list-style-type: none"> • Same as Alternative A 	<p><u>Vermilion</u>(cont.)</p> <ul style="list-style-type: none"> • Progress towards meeting Standards more quickly than Alternative A, B, and C • Trend would be upward <p><u>Willow Gulch</u></p> <ul style="list-style-type: none"> • Same as Alternative A 	<p><u>Vermilion</u> (cont.)</p> <ul style="list-style-type: none"> • Progress towards meeting Standards more quickly than Alternative A, B, C and D • Trend would be upward <p><u>Willow Gulch</u></p> <ul style="list-style-type: none"> • Closure of Calf Creek to livestock grazing between Upper and Lower Falls • Other impacts same as Alternative A
Impacts to Vegetation				
<ul style="list-style-type: none"> • No direct impacts • No progress toward achieving desired plant community (DPC) for any community type <p><u>Aspen</u></p> <ul style="list-style-type: none"> • continue to regenerate <p><u>Evergreen Forest</u></p> <ul style="list-style-type: none"> • Light use & minimal impact would continue • Potential increase in grazing use from shift in livestock distribution into this community 	<ul style="list-style-type: none"> • No direct impacts <p><u>Aspen</u></p> <ul style="list-style-type: none"> • Same as A <p><u>Evergreen Forest</u></p> <ul style="list-style-type: none"> • Same as A 	<ul style="list-style-type: none"> • No direct impacts <p><u>Aspen</u></p> <ul style="list-style-type: none"> • Same as A <p><u>Evergreen Forest</u></p> <ul style="list-style-type: none"> • Same as A 	<ul style="list-style-type: none"> • No direct impacts <p><u>Aspen</u></p> <ul style="list-style-type: none"> • Same as A <p><u>Evergreen Forest</u></p> <ul style="list-style-type: none"> • Same as A 	<ul style="list-style-type: none"> • Impacts to all plant communities same as Alternative D

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Vegetation (cont.)				
<p><u>Oak woodland</u></p> <ul style="list-style-type: none"> • Potential degradation in health & conversion to P/J from increase in livestock use in this community <p><u>Pinyon-juniper</u></p> <ul style="list-style-type: none"> • Continued degradation of understory vegetation • Potential change from cool to warm season grasses <p><u>Ponderosa/Douglas Fir</u></p> <ul style="list-style-type: none"> • Light use & minimal impact would continue • Potential negative impact from shift in livestock distribution to this community <p><u>Blackbrush</u></p> <ul style="list-style-type: none"> • Degradation from increase in exotic species and conversion from cool to warm season grasses <p><u>Desert Shrub</u></p> <ul style="list-style-type: none"> • Decrease in shrubs and grasses and Increased exotics • Potential shift to non-functioning 	<p><u>Oak woodland</u></p> <ul style="list-style-type: none"> • Continue to function • DPC would be achieved <p><u>Pinyon-juniper</u></p> <ul style="list-style-type: none"> • More diverse age structure and diversity of understory species • Progress toward achieving DPC <p><u>Ponderosa/Douglas Fir</u></p> <ul style="list-style-type: none"> • Same as A except slight improvement in community health expected <p><u>Blackbrush</u></p> <ul style="list-style-type: none"> • Gradual improvement in community health • Slow progress toward achieving DPC • Conversion from cool to warm season grasses <p><u>Desert Shrub</u></p> <ul style="list-style-type: none"> • Gradual improvements in veg. cover • Slow progress toward achieving DPC 	<p><u>Oak woodland</u></p> <ul style="list-style-type: none"> • Same as B <p><u>Pinyon-juniper</u></p> <ul style="list-style-type: none"> • More diverse age structure and diversity of understory species • Progress toward achieving DPC • Decrease in plant cover due to increased livestock dispersal <p><u>Ponderosa/Douglas Fir</u></p> <ul style="list-style-type: none"> • Same as B <p><u>Blackbrush</u></p> <ul style="list-style-type: none"> • Same as B <p><u>Desert Shrub</u></p> <ul style="list-style-type: none"> • Moderate improvements in veg. cover and biological soil crust. • Increased progress toward achieving DPC compared to B 	<p><u>Oak woodland</u></p> <ul style="list-style-type: none"> • Same as B <p><u>Pinyon-juniper</u></p> <ul style="list-style-type: none"> • Increase in age structure and diversity of understory species • Decrease in plant cover due to increased livestock dispersal • Increase in cool season grasses • Greater progress toward achieving DPC compared to A, B, or C <p><u>Ponderosa/Douglas Fir</u></p> <ul style="list-style-type: none"> • Same as B <p><u>Blackbrush</u></p> <ul style="list-style-type: none"> • Greater ability for community to recover than A, B, or C <p><u>Desert Shrub</u></p> <ul style="list-style-type: none"> • Increased progress toward achieving DPC compared to B or C 	

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Vegetation (cont.)				
<p><u>Grassland & Meadow</u></p> <ul style="list-style-type: none"> • Increased exotics • Conversion to other communities likely <p><u>Mountain shrub</u></p> <ul style="list-style-type: none"> • Light use & minimal impact would continue <p><u>Sagebrush/grassland</u></p> <ul style="list-style-type: none"> • Reduced vigor & reproduction of desired shrubs and grasses • Increase in undesired shrubs, P/J and soil loss from erosion <p><u>Seedings</u></p> <ul style="list-style-type: none"> • Continued downward trend • Potential to be dominated by exotics <p><u>Wetland/riparian</u></p> <ul style="list-style-type: none"> • Continued degradation and loss of riparian vegetation • Continued spread of exotics 	<p><u>Grassland & Meadow</u></p> <ul style="list-style-type: none"> • long term increase in veg. cover • Slow progress toward achieving DPC <p><u>Mountain shrub</u></p> <ul style="list-style-type: none"> • Same as A <p><u>Sagebrush/grassland</u></p> <ul style="list-style-type: none"> • Increased veg. cover, species composition & diversity • Slow progress toward achieving DPC <p><u>Seedings</u></p> <ul style="list-style-type: none"> • Continued deterioration of soil conditions • Limited long-term persistence • slow progress toward DPC <p><u>Wetland/riparian</u></p> <ul style="list-style-type: none"> • Increase in total veg. cover and age classes of woody species • Potential expansion of riparian zone • Continued competition of exotic species 	<p><u>Grassland & Meadow</u></p> <ul style="list-style-type: none"> • Same as B <p><u>Mountain shrub</u></p> <ul style="list-style-type: none"> • Same as A <p><u>Sagebrush/grassland</u></p> <ul style="list-style-type: none"> • Increased veg. cover, species composition & diversity over larger area than in B • Greater potential in achieving DPC • Early detection of community changes <p><u>Seedings</u></p> <ul style="list-style-type: none"> • Potential increase in weeds • Slow to moderate progress toward DPC <p><u>Wetland/riparian</u></p> <ul style="list-style-type: none"> • Greater increase in total veg. cover and age classes of woody species than B • Potential larger expansion of riparian zone than B 	<p><u>Grassland & Meadow</u></p> <ul style="list-style-type: none"> • Same as B but with more rapid progress toward achieving DPC <p><u>Mountain shrub</u></p> <ul style="list-style-type: none"> • Same as A <p><u>Sagebrush/grassland</u></p> <ul style="list-style-type: none"> • Same increases identified in C over larger area • Greater potential in achieving DPC compared to B or C • Early detection of community changes <p><u>Seedings</u></p> <ul style="list-style-type: none"> • Slow to moderate progress toward DPC • Greater chance for long term persistence <p><u>Wetland/riparian</u></p> <ul style="list-style-type: none"> • Greater increase in total veg. cover and age classes of woody species than B or C • Potential larger expansion of riparian zone than B or C 	

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Threatened, Endangered & Sensitive Plant Species				
<ul style="list-style-type: none"> Continued little to no impacts from livestock grazing on most species Potential loss of pollinators as health of adjacent communities decline Potential decline of Kodachrome Bladderpod 	<ul style="list-style-type: none"> Continued little to no impacts from livestock grazing on most species Potential loss of pollinators as health of adjacent communities decline Kodachrome Bladderpod would not change or show improvement 	<ul style="list-style-type: none"> Same as B 	<ul style="list-style-type: none"> Same as B 	<ul style="list-style-type: none"> Same as B
Impacts to Riparian and Water Resources				
<u>Watershed Health</u> <ul style="list-style-type: none"> Degraded hydrologic conditions would remain static or continue to degrade. Degraded seedings would continue to deteriorate and be vulnerable to high rates of runoff. 	<u>Watershed Health</u> <ul style="list-style-type: none"> Slight to moderate reduction in the severity of impacts on upland hydrologic processes. Slight to moderate improvements in understory cover causing commensurate reductions in runoff. Degraded seedings would continue to deteriorate and be vulnerable to high rates of runoff. 	<u>Watershed Health</u> <ul style="list-style-type: none"> Moderate reduction in the severity of impacts on upland hydrologic processes. Moderate improvements in understory cover causing commensurate reductions in runoff. Beneficial impacts would occur more quickly under this Alternative than under Alternative B Increase in vegetation, infiltration, and decreased runoff. 	<u>Watershed Health</u> <ul style="list-style-type: none"> Similar as Alternative C, except improvements would occur more quickly and over a much larger portion of the EIS area 	<u>Watershed Health</u> <ul style="list-style-type: none"> Similar as Alternative D, except improvements would occur over a larger portion of the EIS area

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Riparian and Water Resources (cont.)				
<p><u>Riparian PFC</u></p> <ul style="list-style-type: none"> • Riparian area restoration would occur on a site by site basis as resources allow. • Riparian areas would receive improved protection and restoration <p><u>Water Quality</u></p> <ul style="list-style-type: none"> • Current trends in upland and riparian areas would continue. • Grazing would continue to have negligible to minor impact on TDS and salinity. 	<p><u>Riparian PFC</u></p> <ul style="list-style-type: none"> • Riparian systems on all allotments would benefit • Bank stability would improve • Headcut development and migration would slow • herbivory and trampling would be reduced <p><u>Water Quality</u></p> <ul style="list-style-type: none"> • Livestock use around springs would be reduced • Riparian vegetation near unfenced streams would continue to be impacted by livestock. • Channel incision and widening would continue, although recovery of riparian vegetation would allow channels to stabilize over time. 	<p><u>Riparian PFC</u></p> <ul style="list-style-type: none"> • Same as Alternative B <p><u>Water Quality</u></p> <ul style="list-style-type: none"> • Same as Alternative B 	<p><u>Riparian PFC</u></p> <ul style="list-style-type: none"> • Similar to Alternatives B and C, except riparian areas would see immediate removal of livestock impacts where grazing suspensions or closures occur. <p><u>Water Quality</u></p> <ul style="list-style-type: none"> • Similar to Alternative B, except springs and streams would see immediate removal of livestock impacts where grazing suspensions or closures occur. 	<p><u>Riparian PFC</u></p> <ul style="list-style-type: none"> • Similar to Alternatives B, C, and D, except riparian areas would see immediate removal of livestock impacts where grazing suspensions or closures occur. <p><u>Water Quality</u></p> <ul style="list-style-type: none"> • Similar to Alternative B, except springs and streams would see immediate removal of livestock impacts where grazing suspensions or closures occur.
Impacts to Biological Soil Crust				
<ul style="list-style-type: none"> • No change in impacts 	<ul style="list-style-type: none"> • No new direct impacts from grazing • Trampling impacts reduced • Localized impacts from proposed improvements 	<ul style="list-style-type: none"> • Same as B 	<ul style="list-style-type: none"> • Greater decrease in livestock related impacts than B or C • Localized impacts from proposed improvements 	<ul style="list-style-type: none"> • No concentrated impacts around structural improvements

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Soils				
<ul style="list-style-type: none"> • Soil resource condition would improve the least and likely would further degrade • No increase in protective cover of vegetation and litter • No new grazing management strategies for enhanced soil protection measures 	<ul style="list-style-type: none"> • Soil resource condition would be maintained but enhancement would be slow • Slow increase in protective cover • New grazing management strategies only to make progress towards meeting Standards may provide some enhanced soil protection measures over time. 	<ul style="list-style-type: none"> • Soil resource condition would improve more readily than under A or B • Protective cover would be maintained or increased. • Changes in grazing management strategies would consider soils with a high risk of degradation 	<ul style="list-style-type: none"> • Soil resource condition would improve more readily than under A, B, or C • Protective cover would increase more rapidly than C • Changes in grazing management strategies would consider soil resource with emphasis on minimizing soil disturbance 	<ul style="list-style-type: none"> • Soil resource condition would improve most readily compared to other alternatives • Protective cover would increase most rapidly • Changes in grazing management strategies would emphasize plant restoration resulting in expedited recovery of soil health.
Impacts to Noxious Weeds and Non-native Plants				
<ul style="list-style-type: none"> • Gradual increase in Noxious and/or invasive plant species spread likely • Current closed allotments would not experience any livestock dispersed increase in noxious and/or exotic species. 	<ul style="list-style-type: none"> • Gradual increase in Noxious and/or invasive plant species spread likely • Decrease in noxious and invasive plant species with successful restoration. • Potential for localized increase in weed spread from soil disturbing actions 	<ul style="list-style-type: none"> • Closed allotments or pastures would not experience any livestock dispersed Noxious and/or invasive plant species. • Reduced spread noxious and/ or invasive plant species on allotments with temporary non-use or suspension of livestock grazing 	<ul style="list-style-type: none"> • Same as C except number of allotments closed or having temporary suspensions differs 	<ul style="list-style-type: none"> • Same as C except number of allotments closed or having temporary suspensions differs

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Noxious Weeds and Non-native Plants (cont.)				
	<ul style="list-style-type: none"> • Increase in distribution of Noxious and/or invasive species likely from increased livestock distribution • Reduced spread of noxious and/or invasive plant species by removal of feral cows 	<ul style="list-style-type: none"> • Decrease in noxious and invasive plant species with successful restoration • Potential for localized increase in weed spread from soil disturbing actions • Increase in distribution of Noxious and/or invasive species likely from increased livestock distribution 		
Impacts to Wildlife				
<ul style="list-style-type: none"> • Impacts to bird species from continued changes in veg. cover, diversity & structure • Continued trampling impacts on ground nesting birds • Continued impacts on riparian dependant species due to increased recovery time for riparian and meadow communities • Minimal impacts to bat species 	<ul style="list-style-type: none"> • Reduced impacts to bird species compared to A • Reduced trampling impacts on ground nesting birds. • Reduced impacts to riparian dependent species • Reduced competition for food and water resources for many wildlife species 	<ul style="list-style-type: none"> • Greater reduction in habitat related impacts to wildlife compared to B • More fence related impacts to migrating mule deer and pronghorn antelope. • Increase in cover impacting barren ground dependant migratory bird species. • Habitat enhanced for riparian dependent species 	<ul style="list-style-type: none"> • Similar impacts to Alt C with greater reduction in habitat related impacts and forage and water competition • Greater enhancement of habitat conditions for Mexican Spotted Owl and Southwestern Willow Flycatcher compared to B or C 	<ul style="list-style-type: none"> • Similar impacts to Alt C with greater reduction in habitat related impacts and forage and water competition than other alternatives • Greater enhancement of habitat conditions for Mexican Spotted Owl and Southwestern Willow Flycatcher compared to B, C ,or D

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Wildlife (cont.)				
<ul style="list-style-type: none"> Continued competition for food and water resources for many wildlife species No improvement to habitat conditions for Mexican Spotted Owl and Southwestern Willow Flycatcher 	<ul style="list-style-type: none"> Improved habitat conditions for Mexican Spotted Owl and Southwestern Willow Flycatcher 	<ul style="list-style-type: none"> Greater reduction in competition for food and water resources for many wildlife species compared to B Greater enhancement of habitat conditions for Mexican Spotted Owl and Southwestern Willow Flycatcher compared to B 		
Impacts to Cultural Resources				
<ul style="list-style-type: none"> Existing impacts would continue but no new impacts expected Less protection to cultural resource than alternatives B-E 	<ul style="list-style-type: none"> Grazing related impacts would continue or have slight reduction 	<ul style="list-style-type: none"> Decreased grazing related impacts to cultural resources over Alternative B 	<ul style="list-style-type: none"> Decreased grazing related impacts to cultural resources over Alternative B and C 	<ul style="list-style-type: none"> Decreased grazing related impacts to cultural resources compared to B, C, or D
Impacts to Recreation				
<ul style="list-style-type: none"> Conflicts between recreational users and livestock would worsen over the long-term 	<ul style="list-style-type: none"> Conflicts between recreational users and livestock partially resolved Proposed range improvements reduce natural appearing landscapes 	<ul style="list-style-type: none"> Conflicts between recreational use and livestock would mostly be reduced or eliminated 	<ul style="list-style-type: none"> Same as Alternative C 	<ul style="list-style-type: none"> Same as Alternative C

CHAPTER 2 ALTERNATIVES

Table 2-10 Comparative Summary of Impacts by Alternative Continued

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Impacts to Socio-Economics				
<ul style="list-style-type: none"> • Minimal Change to present total economic situation for area • Minimal change to economic situation of ranching and farming industry • No permittees would cease operations as a result of action • Custom and culture of ranching unchanged 	<ul style="list-style-type: none"> • Minimal Change to present total economic situation for area • Minimal change to economic situation of ranching and farming industry • No permittees would cease operations as a result of action • Custom and culture of ranching unchanged 	<ul style="list-style-type: none"> • Short-term potential total income loss of .04% for area • Long-term potential total income loss of .02% for area • Short-term potential income loss of 3% to ranching and farming industry • Long-term potential income loss of 2% to ranching and farming industry • 5 permittees may cease operations • Custom and culture of ranching continues for area 	<ul style="list-style-type: none"> • Short-term potential total income loss of .10% for area • Long-term potential total income loss of .02% for area • Short-term potential income loss of 7.8% to ranching and farming industry • Long-term potential income loss of 2% to ranching and farming industry • 7 permittees may cease operations • Custom and culture of ranching continues for area 	<ul style="list-style-type: none"> • Short-term potential total income loss of .14% for area • Long-term potential total income loss of .02% for area • Short-term potential income loss of 11.3% to ranching and farming industry • Long-term potential income loss of 2% to ranching and farming industry • 10 permittees may cease operations • Custom and culture of ranching continues for area